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Number 7
(Old Series No. 11)

THE SOUTHERN MEDICAL JOURNAL

JOURNAL OF THE SOUTHERN MEDICAL ASSOCIATION

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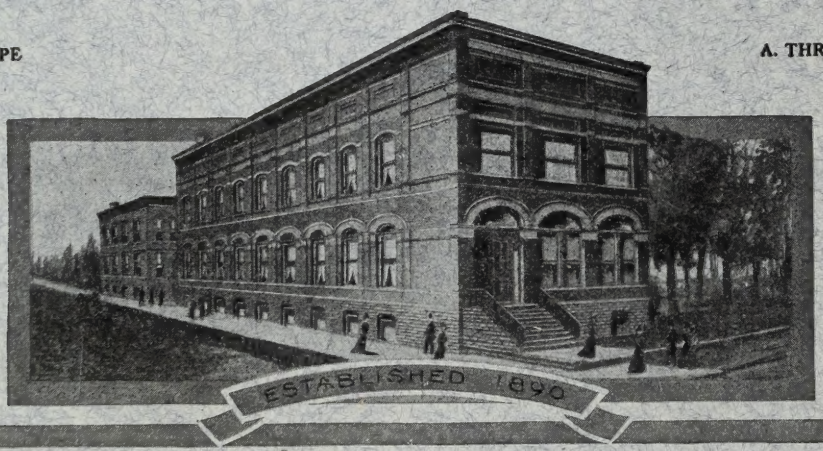

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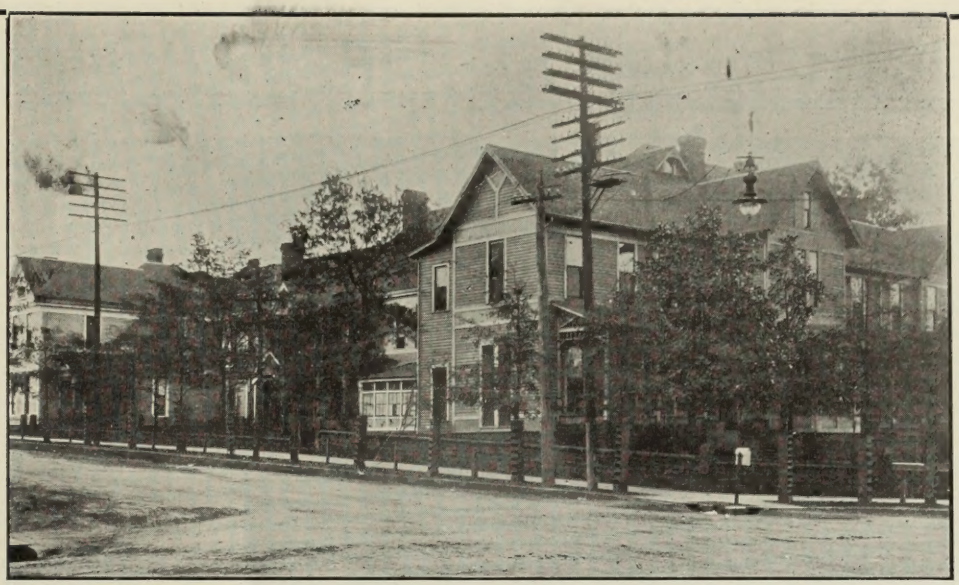

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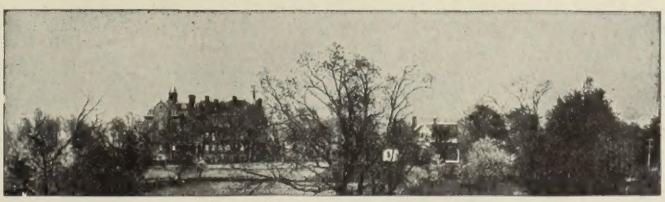

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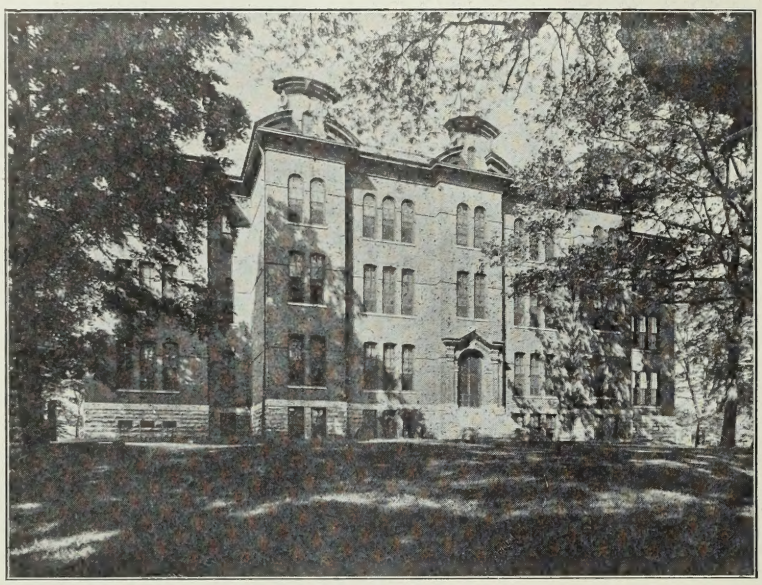

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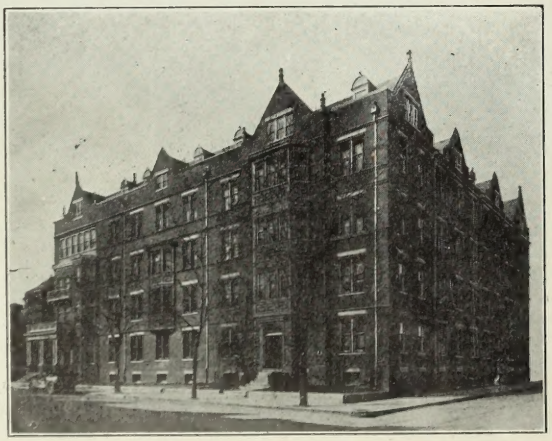

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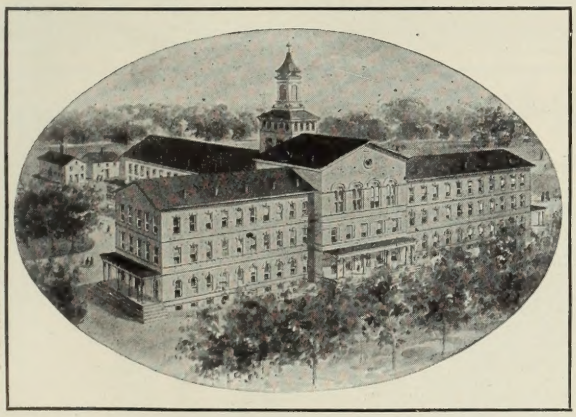

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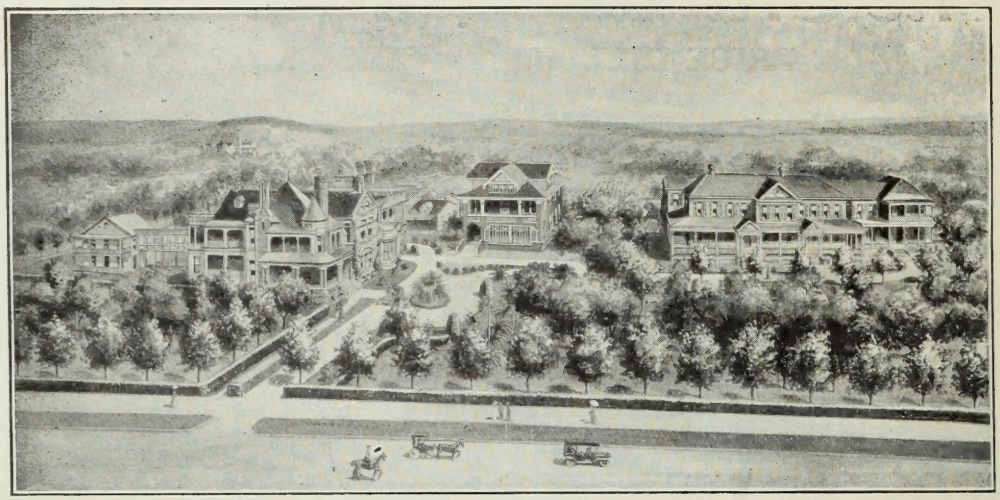

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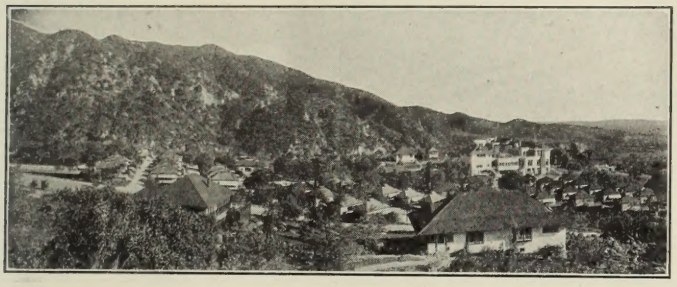

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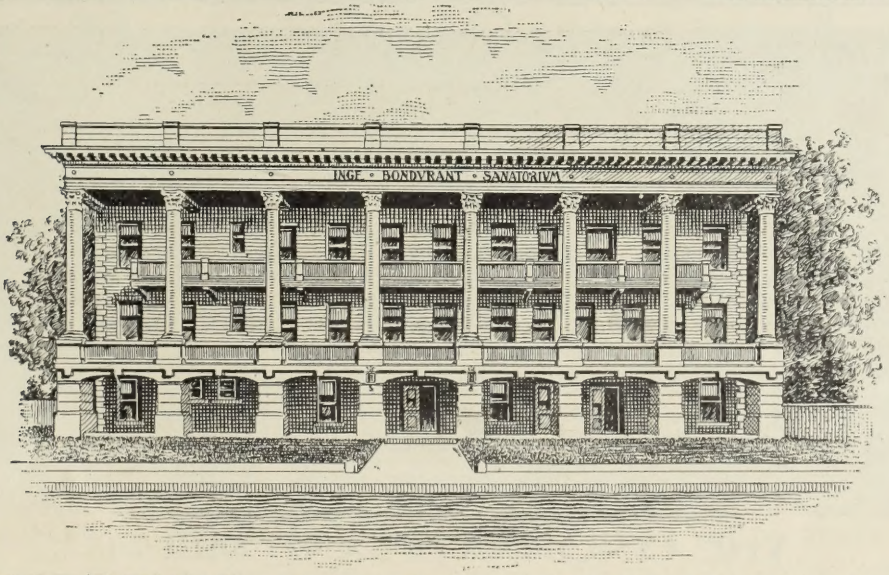

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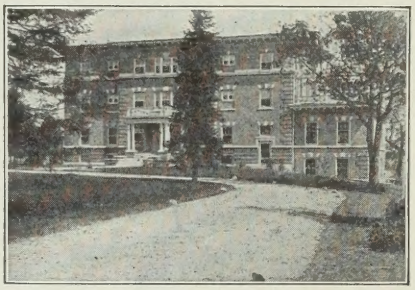

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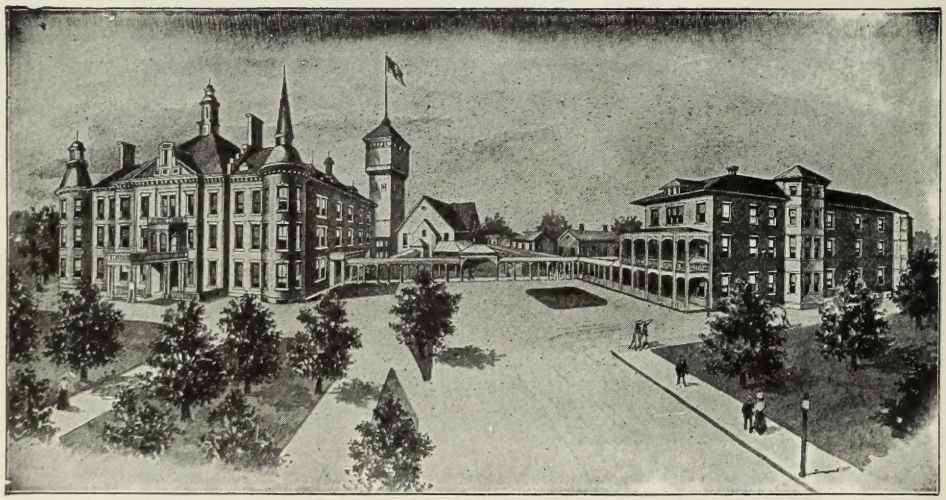

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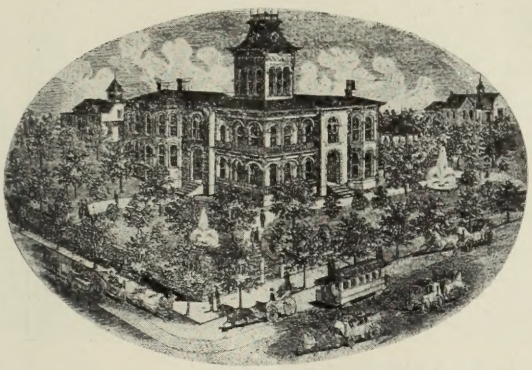

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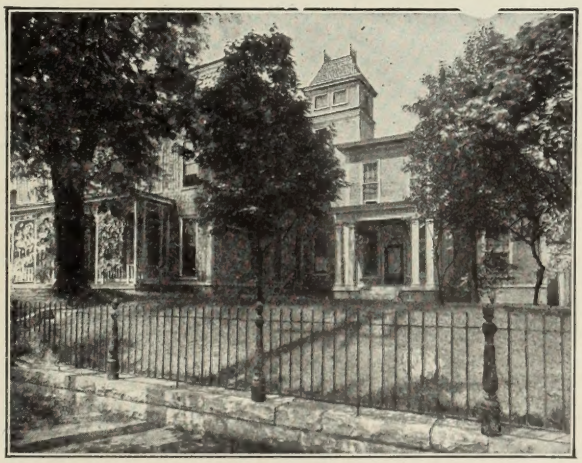

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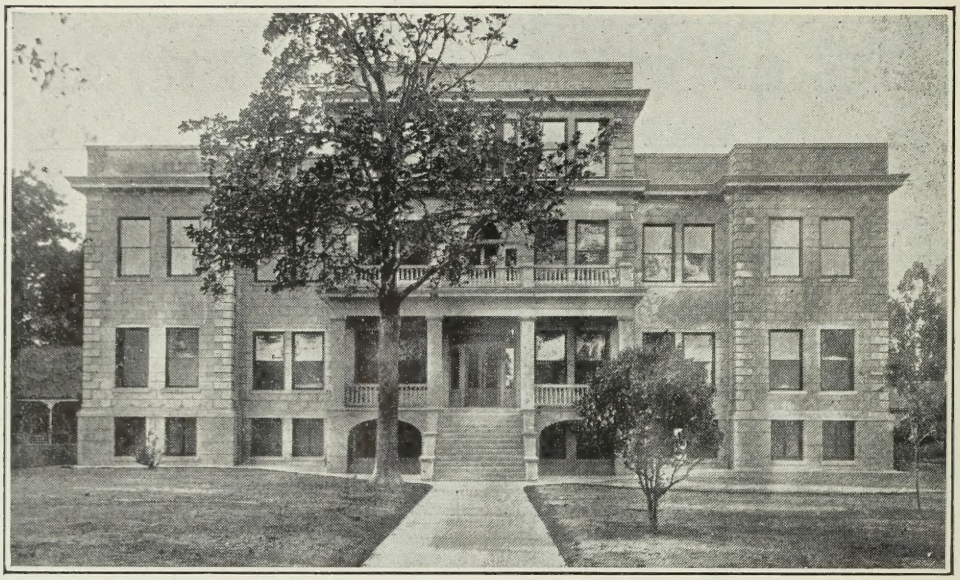

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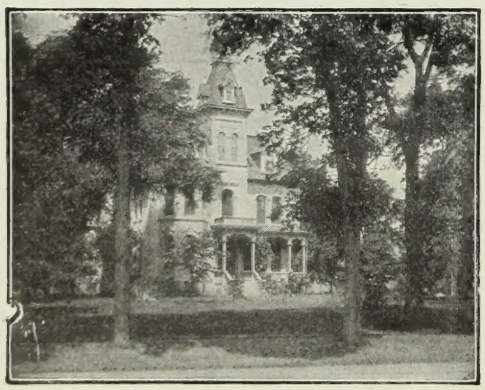

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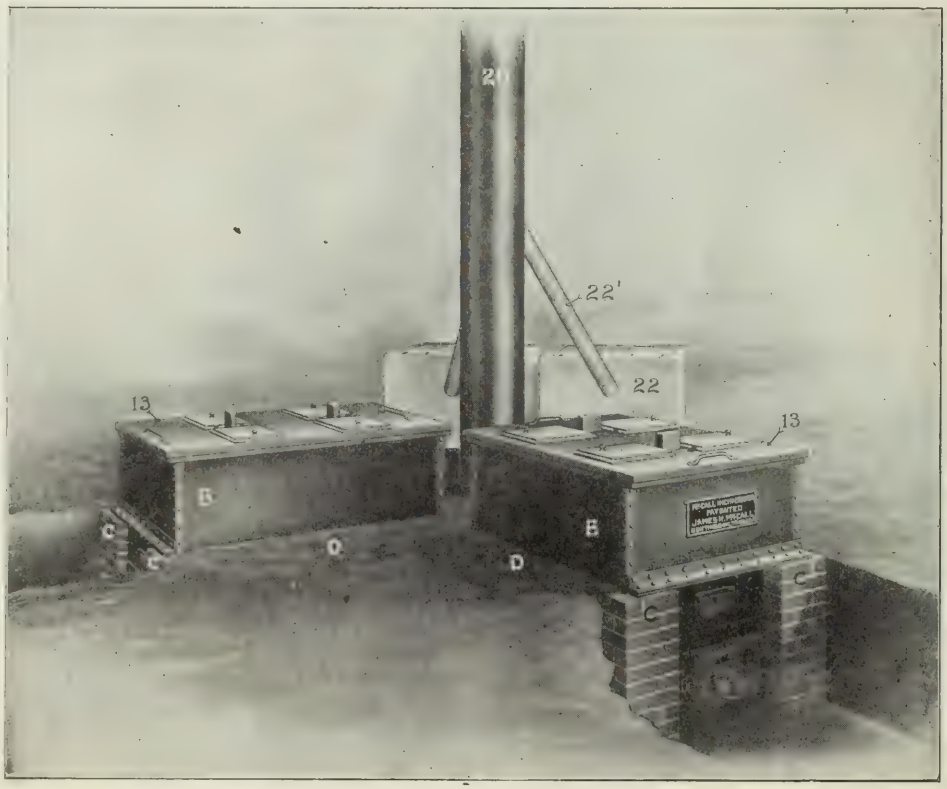

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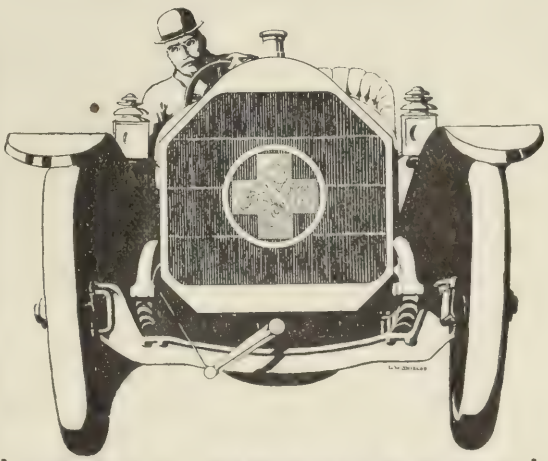

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SOUTHERN MEDICAL JOURNAL

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ORIGINAL ARTICLES

TREATMENT OF PELLAGRA.*

By C. C. BASS, M.D.,
New Orleans, La.

In this paper it is intended to discuss certain ideas in the treatment of pellagra which both theory and the observation of over two hundred cases seem to support. No attempt is made to consider the many drugs and remedies which the literature of the subject shows have been tried. It might be stated here that scores of remedies have been employed and recommended for the specific treatment of pellagra at some time or another, but, barring one exception, arsenic, none of them has borne the test of time. This view is unreservedly set forth in a recent translation of and additions to Maries' book on this subject by Lavinder and Babcock.

The symptomatic treatment will not be taken up as it is the same as for the same symptoms in other diseases.

A fundamental principle in the treatment of any disease calls for removal or neutralization of the cause, especially if the disease is due to a toxin. We are at once confronted with the question, What is the cause of pellagra? Two answers to the question are given by students of the disease. One is that it is due to some toxic substance in either sound or spoiled corn or corn products, and the other that its cause is unknown, but is *not* corn toxin.

The first opinion is held by the majority of students of the disease and the latter by a small minority. My own opinion is that one essential etiological factor is a toxic substance formed chiefly in immature corn when stored in a damp condition and probably under other influences favoring decomposition. I have not seen a single case of pellagra that could not be explained by the maize theory, provided due allowance is made for idiosyncrasy or predisposition; and provided the other etiological factors are duly considered.

It is not probable that it is necessary for a susceptible individual to take a large quantity of the poison to produce the disease, but other things being equal the larger the dose and the longer the use of it is continued, the severer the symptoms.

There is abundant evidence that one poisoning by spoiled corn renders the patient hyper-sensitive to a subsequent dose. This sensitization may develop to such a degree that very small quantities of the toxin, such as are present in apparently sound corn, may produce the disease. Experimenting along this line, already thoroughly covered by Lombroso, I have on two occasions produced stomatitis and diarrhoea in pellagra patients in whom these symptoms were not then present, by feeding them for several days exclusively on corn meal mush. Both samples of meal were imported; one was sweet, the other was musty and had a sour taste. The diarrhoea appeared in four days in the patient fed on

*Read at the eighth annual meeting of the American Society of Tropical Medicine, held in New Orleans, May 18 and 19, 1911.

musty, sour meal mush and though the diet was discontinued at once, the diarrhoea persisted for a while over two weeks. The same musty, sour meal mush did not produce similar symptoms in a normal individual, but he refused to eat it after the third day. It is fair to say, however, that in several other instances quiescent pellagra patients have not developed symptoms when fed on corn food with plenty of other food.

We have many examples of similar hypersensitization or idiosyncrasy to toxic and, in fact, to ordinarily non-toxic substances, such as shell fish, strawberries, pollen, horse-serum, quinine, morphine, atropine, etc. As examples of similar chronic toxic disease conditions in animals may be mentioned ergotism, fagopyrismus or buckwheat disease in animals, neuritis of fowls produced by eating polished rice, etc. In each of these the poison may be withdrawn after the symptoms have been established, but the disease continues and often progresses and proves fatal days and weeks afterward.

It is not uncommon for the history of a pellagra patient to be that he seldom eats corn or that he does not eat as much cornbread as other members of his family who are well. A case of pellagra caused by amylophagy and reported by me last year illustrates how the history on this point may mislead. The patient had a severe case of pellagra of about eight months' duration, except for the usual winter intermission. She and her husband denied emphatically that she had ever eaten corn food of any sort. She had been reared in a section of country and in a family in which corn was considered a good hog and cattle food, but not fit for man, except southern negroes and poor white people. After concluding that this was certainly one case in which the history absolutely contradicted the maize theory, the husband called me aside and told me something they had been keeping a profound secret. It was that several months before the first symptoms were recognized the patient had taken up the habit of eating starch. The habit grew until she was eating a pound or more a day, largely to the exclusion of other food. Investigation brought out the fact that the starch eaten was corn starch made by a certain well known manufacturer of corn products including a breakfast food. I have seen a progressive fatal case of pellagra whose chief diet for months had been this particular breakfast food.

If, as seems highly probable, one of the causes of pellagra is corn food, and especially if small quantities of the toxin sometimes present in apparently sound corn can cause a recurrence and intensification of the symptoms after the patient has once been sensitized to it, then one important part of the treatment of every case of pellagra is to withdraw all corn products from the dietary for all time. Though the evidence against corn may not be surely conclusive, it is strong enough to demand this treatment until the solution of the problem is reached.

One of the most striking and conclusive experiments relative to the influence of this measure in the treatment and prevention of pellagra in this country has been done at the Louisiana Hospital for the Insane at Lineville, La. In the spring of 1909, when the hospital was overrun with pellagra, which had been present in the institution for many years, many cases having developed in patients long resident in the institution, the superintendent, Dr. J. N. Thomas, accepted the maize theory and at once struck all corn food from the diet list. During that summer many of the cases recovered and a few died. Dr. Thomas wrote me May 11, 1911, that since discontinuing corn food about two years ago only three cases of pellagra had developed in the institution. Two of these had had the disease in the institution before and the other one developed it about two weeks after admission. This patient had also had pellagra previously and no doubt got his toxin prior to entering the hospital.

SUNSHINE.

Though corn toxin appears to be an essential etiological factor, it rarely produces the commonly recognized symptoms of pellagra, except when aided by certain other important symptoms. One of these is sunlight. Almost all the skin lesions occur on the parts of the body most exposed to the direct rays of the sun, and little doubt exists in the mind of anybody who has studied many cases with this point in mind. Sunshine is not the only thing that will cause pellagrous skin lesions, however. Exposure to X-rays that would not burn a normal individual will sometimes cause a dermatitis not unlike pellagra in pellagrins, as the writer has had opportunity to observe in at least one instance. Chemical irritants, such as dilute carbolic acid, icthyol ointment, tar ointment, acid perspiration under pendulous mammae, irritating vaginal discharge, etc., will often produce the skin lesions. In two instances I have applied the vaginal discharge and saliva of active pellagra patients to their skin by binding to the arm a sponge saturated with the fluid. One case developed characteristic erythema from both. The other only from the vaginal secretion. The applications remained 12 to 19 hours. I secretly subjected my own arm to the same treatment with negative results. Strong ointments applied to pellagrous lesions almost always make them worse and frequently cause them to spread over the healthy skin covered by such irritants. Still another cause of the skin lesions of pellagra is trauma or physical force. Examples of this are the lesions sometimes seen on the knees of patients who kneel a great deal or on the elbows of bed-ridden patients caused by raising and supporting themselves in bed on the elbows. Lesions sometimes seen on the penis and scrotum are usually caused by pinching by tight fitting clothes and are therefore seldom bilateral and symmetrical as are the lesions on other parts of the body.

Raubitschek (Wien. klin. Woch. vol. 23, No. 26, June, 1910), directs attention to the experimental work of Aschoff on fagopyrismus or buckwheat disease in animals. General and local symptoms are produced. The toxic substance is soluble in organic solvents and is possibly related to the vegetable lipochromes. Aschoff found that when white or spotted animals are fed the toxin and are exposed to sunlight, symptoms promptly develop, but if they are kept in the dark, or if dark animals are used, they usually escape.

Raubitschek says: "All these phenomena stand in near relation to so-called photodynamy, viz.: that under the influence of certain fluorescent color stuffs the effect of light on exposed surfaces in animals is to produce erythema and other skin changes with eventual death of the animal. Some such idea may be entertained in pellagra."

He fed white and gray mice on bad and good polenta and subjected them to sunlight and darkness. Most of the white mice died in the sunlight and survived in darkness. Most of the grey mice survived in both.

When we first began to recognize pellagra in New Orleans over two years ago, on several occasions we placed patients in the sunshine with parts of the body exposed to see if skin lesions would be produced for diagnostic and experimental purposes. In several instances lesions followed in from three to ten days, but it was soon observed that coincidentally with the development of the skin lesions, other symptoms already present grew worse, and symptoms that were absent at the beginning of the experiment often developed. In one instance insanity was much increased. In another severe diarrhoea, stomatitis and salivation resulted. In others the diarrhoea was increased and it was decided that the experiment was not justified. The skin lesions of most cases of pellagra do not cause much discomfort or inconvenience to the patient; but the coincident intensification of the entire disease process demands that the production of these lesions be rigidly guarded against. Quiescent cases should carefully protect their skins from direct sunlight by wear-

ing gloves, wide-brimmed hats, by using umbrellas and otherwise. Active cases should avoid not only sunshine, but as much as possible sunlight. The most perfect protection from actinic rays would be obtained in a room lighted with ruby lights and having ruby window glass. This can usually be done at little cost.

An interesting observation of the influence of sunlight on the disease of chickens, considered by the Italians to be pellagra, and caused by feeding them mouldy corn, was made on a nearby farm. The symptoms of the disease occur in the summer, and especially in young chickens. They shed their feathers and do not put on any more. They droop about, do not grow and often their backs blister and they usually finally die. Those that live until cold weather, it appears, as a rule, put on feathers and fully recover. The farmer learned that practically all these chickens died if let run out in the sun, but if kept in a coop in the shade practically all put on feathers and recovered.

INFLUENCE OF CLIMATE ON PELLAGRA.

The history of pellagra the world over and as far back as we have any history of it is that it is a disease of warm climates and occurs chiefly in the warm season of warm climates. The initial attack usually occurs following the warm days of spring, summer or autumn and seldom in winter. Recurrences occur in the warm season with rare exception. Patients who live until winter and are not too badly damaged generally improve or entirely recover promptly, following the first cold spell. In the north of the United States the cold season is so long and the hot season so short that little pellagra occurs, while it exists in the south to some extent the year round. In this country the history of the disease with regard to this point is practically the same as it is in other parts of the world, as briefly stated above. All who have had under observation many cases of pellagra when cold weather appeared have seen them improve and most of them apparently recover remarkably promptly. It is true that a few cases, most of them severe ones, continue to get worse and finally die, even in midwinter. The history often shows that the poisoning occurred during the winter, though if any symptoms develop at this time they are usually very mild. This no doubt depends largely upon the amount of toxin the patient gets and also on other etiological influences. It may sometimes occur that severe symptoms may develop during winter for this reason.

If cold weather prevents the development of the disease and if it generally relieves it after it has developed, then an important part of the indicated treatment is climatic. Whenever practical, patients should at once go to a cold climate and they should not return until cold sets in at home. It is probable that the colder the climate resorted to, the better the results, provided other things are equal.

To reach a cold climate in this country it is necessary to go to a considerable altitude, and due consideration must be given to the influence of the altitude on vital organs. Making the change in several steps ought to obviate this. My own experience has been that the very prompt benefit far outweighs the harm that is likely to be produced by the high altitude and that certainly most pellagra patients can stand sufficiently high altitudes to relieve their active symptoms.

I have had the opportunity of sending twelve pellagra patients to cold climates for relief of active symptoms, but the number is entirely too small to be of statistical value and for this reason the cases will not be reported in detail. The relief from active symptoms related by the patients and by the physicians looking after them is very striking, and I believe more than coincidences. As to what period is necessary to spend in a cold climate before a patient may return to a hot one without danger of causing a relapse, sufficient information is not at hand to answer, but it is quite certainly many months. Probably twelve months is sufficient in most cases.

Whether the improvement is the result of the cold or of other influences cannot be said. If so, it would be perfectly practical to provide an artificially refrigerated ward for this purpose. Such a ward for six patients can be equipped for less than $3,000 and can be run for $1.00 a day per patient in addition to the regular expense, if run in connection with a modern hospital.

ARSENIC.

The only drug that has any general indorsement in pellagra is arsenic in one form or another. I am not sure that I have ever seen any benefit derived from it, but believe it should be thoroughly tried in every case. Fowler's solution is the form generally employed. More recently atoxyl and soamin have been tried with varying results. Still more recently salvarsan has been employed with apparently favorable results. In this connection I desire to record a case of Dr. Jos. Hume's in which salvarsan appears to have failed. The patient had had syphilis about four months when he was given 0.5 gm. salvarsan intra-muscularly by Dr. Hume. Sixteen days after he received the salvarsan his hands began to show the eruption which is now present. I saw him thirty-one days after the injection and two weeks after he first noticed the eruption. The hands showed as typical eruption of a mild case of pellagra as I ever saw. He then gave the history of having had a similar, but milder, attack during the summer of last year.

SUMMARY.

In the light of our present knowledge of the disease the proper treatment of pellagra is:

1. Avoid all food made from corn.
2. Avoid exposure to sunshine and during the active stage avoid exposure to light.
3. When practical resort to a cold climate during the hot months if active symptoms are present.
4. Arsenic may be tried. Salvarsan appears to have failed to influence at least one case.

My unqualified opinion based on observation of cases treated and what information I have gained from a study of the disease is that salvarsan has absolutely no direct specific curative action in pellagra.

741 *Carondelet St.*

TYPHOID FEVER, WITH CASE OF DOUBLE PERFORATION.*

By H. M. FOLKES, M.D.,
Biloxi, Miss.

H. T. P. Age 26; resident of Woolmarket, Miss.; manager of turpentine still; lived in bachelor quarters with his brother; surroundings healthy; water supply from artesian well, about two hundred and fifty feet deep; flies in the neighborhood plentiful; house unscreened.

Was taken sick about June 20 and treated for malaria. Was given calomel and quinine by local physician. Fever disappeared, as was evidenced by thermometer. Plasmodia present in abundance was report of his first physician.

About July 2, presented himself to me, complaining of a slight headache and a feeling of lassitude. Was constipated and felt full after eating. Was given calomel, soda and rhubarb and was instructed to go home and go to bed, as at this time his brother, from the same house as himself, was under treatment by me for typhoid fever.

Patient was seen two days later, at which

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time his tongue was narrow, red on the edges and tip, and not coated. Temperature 100, pulse 94, at 10:20 a. m. From this time until the morning of July 19 he ran a typical typhoid course, being constipated throughout and requiring daily enemata to keep the bowels open, together with an occasional saline. Pulse ranged from 80 to 100, respiration in proportion.

On the morning of the 19th at 11 a. m., entering the fourth week of the fever, temperature 102, pulse 90, he experienced a sudden agonizing pain in the hypogastric region with lightning like darts along the penis.

At 12:15 p. m., at which time I saw him, his temperature was 102.3, pulse 96, respiration 25. At 2:40 temperature was 104.2, pulse 104, respiration 30.

Patient's hands and feet were markedly cold, and he had severe pain in his right shoulder.

At 12:20 one-eighth of a grain of morphine was given hypodermatically. Pain subsided to return again at 2:40.

I operated at 3:48, at which time pulse was 112, respiration 40. Anesthetic ether. Four-inch incision through the linea alba.

As patient had not voided urine since about an hour before perforation, bladder was examined and found empty, except for about thirty minims of urine. Large amount of clear yellow fluid found on going through the peritoneum. Rapid search promptly showed two perforations in the ileum within half inch of each other about fifteen inches from the cecum. Both were included in a reinforced Lembert suture.

The intestine was dropped back into the abdomen and a large fenestrated glass tube was inserted to the bottom of the peritoneal pouch. No attempt was made to wipe out the abdomen as there was no evidence of any extravasation other than the serous looking fluid.

Duration of the operation about forty minutes.

Patient stood operation well and at 5:45 p. m. his temperature was 101.5, pulse 104, respiration 30, perspiring freely. Murphy drip was started and patient was given one-eighth of a grain of morphine, hypodermatically. Abdominal drain from beginning discharged freely.

At 7:50 temperature 99.4, pulse 100, respiration 24, patient sleeping.

At 10 drip was discontinued, at which time temperature was 97.4, pulse 89, respiration 24. some abdominal distention. Rectal tube was inserted and patient was given one-half grain Spartien Sulphate hypodermatically.

At 5.30 on the morning of the 20th his temperature was 97.3, pulse 72, respiration 24. Patient perspiring freely. Voided 8 ounces of urine during the night.

Twenty-four hours after the operation patient's temperature was normal, pulse 80, respiration 24. Had been given nutrient elixir in crushed ice from time to time. Kidneys acting well.

At midnight of the 20th temperature was 99.5, pulse 80, respiration 24. Patient somewhat nervous. Slight pain in abdomen.

Forty-eight hours after the operation temperature was 101, pulse 92, respiration 24. Kidneys acting well. Patient doing nicely other than slight restlessness.

At 8:45 p. m. of the 21st he was given a soap-suds enema, at which time he passed a constipated stool containing clots of blood. Gas expelled freely.

At 1:30 a. m. of the 22d temperature 103 1-10, pulse 102, respiration 28. Slight abdominal distention. He was then given soap-suds enema with good results. Large quantities of gas expelled. At this time the patient was given ¼ of a grain of morphine hypodermatically, without the attending surgeon's orders. Within a few hours the patient became very restless and had marked tympanites. He was then given soap-suds and asafoetida enema, and hot turpentine stupes were applied to the abdomen.

At 2:30 p. m. three days following the operation he was unfortunately given another

¼ grain of morphine, an absolute violation of the attending surgeon's orders, who upon finding out that this had been done, immediately ordered ½ grain tablets of calomel and soda given, one every fifteen minutes until twelve had been taken.

At 8:30 p. m. asafoetida, glycerine and sopa-suds enema was ordered given, at which time gas was expelled freely, but no bowel movement had.

At 9:00 p. m. he was given an alum enema which resulted in a small movement containing mucus. Temperature was 102 3-10, pulse 130, respiration 28. He was given two teaspoonfuls of Epsom Salt.

Shortly after 11:00 he was given another alum enema which resulted in expelling a large amount of gas and some mucus.

1-100 grain doses of eserin, together with 1-60 grain of strychnine was ordered given every three hours.

At 1:00 another alum enema was given. Large amount of gas was expelled and patient seemed to be relieved. No nausea at any time.

Spartein, turpentine and eserin were ordered continued after which patient got along comfortably.

Murphy drip was begun at 7:40 a. m. on the 23d.

Three days after the operation patient's temperature was 101 3-5, pulse 106, respiration 32.

From this time forward the patient seemed to be getting along very comfortably, retaining nourishment, expelling gas, sleeping well and seemed to be on the road to recovery. Temperature ranging from 98 3-5 to 101, pulse from 112 to 130, respiration from 24 to 36.

Exactly one week after the operation he was taken home in an ambulance and after arriving there his temperature was 101½, pulse 116, respiration 32. General condition excellent.

That evening at 7:45 temperature was 99 3-5, pulse 112, respiration 30. He had a large watery stool expelling large quantities of gas.

On the next morning at 7.15 temperature was 99 4-5, pulse 114. He had good night. Passed large quantities of gas both by mouth and rectum.

On the morning of the 27th, about noon, patient vomited without effort a large amount of dark green fluid.

Sometime in the afternoon an asafoetida enema was given after which he expelled a large amount of gas and small amount of dark feces.

On the evening of the 27th his temperature was 101 3-10, pulse 127, respiration 32. Skin, kidneys and bowels acting, but not well. Patient nourished well.

On the morning of July 28th at 9:40 temperature was 100 1-10, pulse 112, respiration 34. During the morning patient again vomited about four ounces of greenish fluid, after which he was given ½ ounce of castor oil. Two or three hours later he again vomited about two or three ounces of the same dark fluid. Murphy drip was then started. Patient quite nervous and restless.

At 6:45 p. m. July 28th pulse 132, respiration 32. Abdomen somewhat distended.

During the night he passed gas from mouth and bowels. Was again given calomel, and the same routine was pursued as in the former pediod at which time his bowels had not moved.

On July 29th, at about the same time in the morning at which he had had his first perforation, the patient complained of same symptoms as had appeared ten days previously. Temperature being 100 2-10, pulse 142, respiration 28. Within thirty minutes the pulse showed marked failure and patient became profoundly shocked and in a profuse perspiration.

Temperature and pulse went right on up and at 12:48 he died, eleven days after the first perforation, of what I have no doubt must have been a second perforation, though I did not reopen the abdomen to investigate,

as his condition did not justify surgical intervention, and an autopsy was not desired.

It is, of course, possible that there was and had been a low grade of peritonitis, which could have caused death and from his projectile vomiting, we must bear this in mind, yet for the most part sudden onset of fatal symptoms would lead one to incline to the idea of perforation.

There are some points about this case that make it of extreme interest to me. In the first place it is the second perforation I have had out of something over two hundred cases of typhoid fever which I have treated in the past eighteen years and makes the fourth death in the series.

The death of this patient eleven days after a successful operation for the first perforation was truly disappointing and certainly of keen regret, as the diagnosis was promptly made and the operation quickly done.

The first case of perforation that I ever saw was about eleven years ago in the person of a strong young married woman in whom the bowels were kept loose by giving Rochelle salts to the extent of producing four or five watery passages per day. I wish to say right here that this was against my judgment, but was done upon the advice of the family physician, from a distance, whom I called into consultation in the early part of the illness.

Her perforation was about the beginning of the third week at nine o'clock at night and she was dead by ten o'clock the following morning from shock.

All of the perforation cases of which I have heard have died within twenty-four or thirty-six hours after the perforation, from which fact it is very evident that a too early diagnosis cannot be made nor too prompt surgical intervention had to save the patient.

In both these patients the onset of the perforation was indicated by sudden, agonizing pain. In the woman, I do not recall the radiation of the pain but that in the man has been described in the early part of the paper as darting with marked intensity to the penis.

Attention is again called to the fact that there was practically an uria for six or eight hours as the bladder was found almost empty, at the time of operation.

Another point of interest to me was the marked recession of the temperature, pulse and respiration following the surgical procedure. This recession lasted for forty-eight hours, at which time the condition seemed to resume the normal typhoid course, which of course was to have been anticipated as the surgical intervention would surely give no cessation of typhoid symptoms. The absence of the necropsy, of course to a certain extent, diminished the absolute certainty as to there having been a second perforation, though all the symptoms would lead one to be practically sure that this was the case.

DISCUSSION.

Dr. John B. Murphy, Chicago.—"This paper is very interesting to me. You will pardon me for talking on this subject, but I was very much interested in the progress in the first case, and I am unable to explain the cause of death; but the results in perforations of the intestine in typhoid fever constitute one of the most brilliant chapters in modern surgery, and one every surgeon should be proud of, and these results are obtained, first, by the early diagnosis, followed by prompt action. It is difficult in a case that has been severely ill with typhoid fever to suggest and do an immediate laparotomy. The difficulty is in making the diagnosis of perforation, but the symptoms as they appear in a case of perforation in typhoid fever are clear-cut, as a rule. They are clean-cut when there is a perforation; they are clean-cut when there is peritonitis without perforation, and you will notice I make a distinction, because there are cases of peritonitis that occur where the ulcer comes so close to the peritoneal surface that the peritoneum is infected through the lymphatics, and you have a distinct infection of the peritoneum without perforation. So far as the patient is concerned, this condition is fatal. The initial symptoms in a case going along usually well are pain, nausea, almost every time, vomiting very frequently, and above all, a sudden increase in local hypersensitiveness, leaving out leucocytosis, as you cannot rely on it in cases of perforation in typhoid fever. Occasionally there is an increase in the number of leucocytes, and occasionally the number of leucocytes is below seven thousand or below normal. The one element on which we rely is that of collapse. The doctor showed in his case that there was no element of collapse in the first attack. Collapse is not a manifestation of perforation necessarily, but a manifestation of the absorption of the products of infection, and never is immediate in the peritoneal cavity. It only comes as a late sign. Formerly, we believed that when collapse occurred it was due to perforation, but as we went into the abdomen and as we recalled the conditions which we

found when we went in, then we knew the changes that were present at that time would not be the changes of an hour or an hour and a half, but the changes of a number of hours, and that we had misinterpreted the pathological conditions as meaning perforation of a few hours when it was really a perforation of many hours. If lives are to be saved in these cases at all it must be done by prompt action. They can be saved and they will be saved by early operative interference. These patients are saved by simply finding the peritoneum that is injured and stopping the leak. There are two things of importance to do, namely, to find the hole and close it up, and put in a tube in order to let the stuff come out that will settle to the bottom if you resort to the Fowler position. That is very important. See to it that you use a tube sufficiently large in size. If you handle the peritoneum and rub it and wash it, you are certain to have a mortality which still continues to occur in the practice of those who flush the peritoneal cavity. Just refer to the statistics of those who resort to the flushing of the peritoneal cavity and compare them with those of practitioners or surgeons who resort to simple drainage to relieve tension, and you will see at once a great difference in their mortality rate. It is so pronounced in the one instance. Anesthesia should be as brief as possible, and the operation done as quickly as it can be. These are very important points. Remember, that all of these intoxications are just exactly the same as an intoxication with alkaloids. If you can tide the patient over a little period of time, not overpowering him by additional operation, let the peritoneum be cofferdamed with infiltration, so that absorption will cease, and commence eliminating the material that is already in his blood, then he is going to get well. He cannot help but get well. You may kill these patients by trying to do too much."

TUBERCULOSIS.*

By F. G. RUTHERFORD, M.D.,
Mobile, Ala.

Tuberculosis is the most universal scourge of the human race. It prevails more particularly in the cities and where the population is massed together and especially among the negroes and unhygienic class, though tuberculosis is not a respector of persons.

In the United States census report for 1900 more than 10 per cent of the deaths were assigned to tuberculosis.

It has been estimated that at least 150,000 persons die annually in the United States of some form of the disease.

The diseases is perhaps more prevalent in the temperate regions than in the tropics, but altitude is a more potent factor than latitude. There has been a remarkable decrease in the death rate from the disease in the United States; the census report shows a decrease of 9.4 per cent of the general death rate in 1900 over 1890, and it is to be hoped that the United States Census of the present year will show a much greater decrease. Patients with advanced pulmonary tuberculosis throw off in the expectoration millions of bacilli daily, as they walk about the streets, where the bacilli are soon dried out and mix with the dust, to be wafted about by the breezes, and are inhaled by the passerby. Cornett collected the dust from the walls and bedsteads of various localities and determined its virulence or innocuousness by inoculation into susceptible animals. Material was gathered from twenty-one wards of seven hospitals, three asylums, two prisons, from surroundings of sixty-two phthisical patients in private practice, and from twenty-nine other localities of which tuberculosis patients were only transient frequenters. Of 118 dust samples he demonstrated that forty were infective and produced tuberculosis. Negative results were obtained with twenty-nine dust samples from the localities occasionally occupied by consumptives. Virulent bacilli were obtained from the dust samples of the walls of fifteen out of twenty-one medical wards. In a room in which a tuberculosis woman had lived the dust from the walls in the neighborhood of the bed was infective six weeks after her death. With such facts before us, the writer is imbued with the idea of thorough fumigation of all places in which consumptives lived and died. The possible transmission of the germ in direct inheritance are three—transmission by the sperm, transmission by the ovum and trans-

mission through the blood by means of the placenta. There is no clinical evidence to support the view that direct transmission can occur through the sperm. The possibility of transmission by the ovum must be accepted as Baumgarten has in one instance been able to detect the tubercle bacillus in the ovum of a rabbit which he had artificially fecundated with tuberculous semen.

Probably the almost constant method of transmission in congenital tuberculosis is through the blood current, the tubercle bacilli penetrating by way of the placenta. Baumgarten assumes that the tubercle bacilli can lie latent in the tissues and subsequently develop when, for some reason, the individual resistance is lowered.

The infective nature of tuberculosis was first demonstrated by Villemin, who showed conclusively in 1865 that it could be transmitted to animals by inoculation. It is now universally conceded that only tuberculosis matter can produce, when inoculated, tuberculosis. A belief in the contagiousness of pulmonary tuberculosis has existed from the days of the early Greek physicians and has persisted among the Latin races. The investigations of Cornett afford conclusive proof that the dust from a room and other localities frequented by patients with pulmonary tuberculosis is infective. The bacilli are attached to fine particles of dust and in this way gain entrance to the system through the lungs. Primary tuberculosis lesions are in a majority of all cases connected with the respiratory system. Flick has studied the distribution of the deaths from tuberculosis in a single city ward in Philadelphia for twenty-five years. His researches go far to prove that it is a house disease. Special danger exists when the contact is very intimate, such, for instance, as between man and wife (by kissing). There are two chief channels of infection by ingestion, tonsillar and intestinal, both probably of great importance in children. Aufrecht suggests that it is through this channel that a large proportion of cases of pulmonary tuberculosis arises.

The bacilli are inhaled, lodge on the tonsils, from which they pass to the glands of the neck and mediastinum.

An infected lymph gland becomes adherent to one of the branches of the pulmonary artery, and the bacilli in this way gain entrance to the circulation, producing miliary tuberculosis. If only a small number escape they are carried to the lungs. At the apices of which they find suitable condition for growth, thereby producing a case of pulmonary tuberculosis.

No age is exempt, but it occurs most frequently, from the eighteenth to the thirty-fifth year. The influence of sex is very slight, women are somewhat more frequently attacked than men, perhaps on account of the more sedentary, indoor life. Certain local conditions also influence infection, the most important of which is the catarrhal condition of the respiratory passages from neglected colds. Certain of the specific fevers also predispose to tuberculosis, among which measles and whooping cough stand in the front rank. Typhoid fever, influenza, variola and syphilis are all believed to favor infection. It is well known that diabetes very often terminates in pulmonary tuberculosis. Trauma produces for a time in the injured parts a *locus minoris resistentiae,* and if the bacilli are present they may receive a stimulus to growth thereby producing tuberculosis of the part injured.

In this type of pulmonary tuberculosis the invasion is very gradual and presents an extraordinarily diverse picture, so that the physician is often led into error. It is probable that many slight, ill defined ailments are due to a local, unrecognized tuberculosis of the lung.

The disease may make considerable progress before the symptoms are sufficient to arouse the attention of the patient, more than to buy some of the "cough and cold cures," but after they have used a dozen or two bot-

...es their cold is not well, and in some cases there may be an excavation of the apex before they consult a physician. Sometimes the symptoms may be masked by the existence of disease in other organs. Frequently the onset of pulmonary tuberculosis is with symptoms of malarial fever—the patient having chills, fever and sweats, which may recur with regularity, thereby misleading the physicians, which is quite a common mistake, to confound the initial rigors of pulmonary tuberculosis with malaria.

Pain in the chest is a local symptom which may be early and troublesome, or it may be absent throughout. Cough is one of the earliest symptoms, and is present in the majority of cases, but it is not a constant symptom. There may be well marked physical signs without cough or expectoration. Then again it may be so severe as to cause vomiting.

To diagnose incipient tuberculosis the physician must rely upon the thermometer and scales, and to get a correct idea of the temperature range, one must follow Ringer's plan of taking temperature, at least twice a day and record it. As fever is the most important initial symptom, and throughout the entire course the thermometer is without question the most trustworthy guide. Two types of fever are seen—the remittent and the intermittent. These may occur indifferently in the early or in the late stages, or may alternate with each other. The pulse is increased in frequency, especially when fever is high; it is full, though soft and compressible. Pulsation may sometimes be seen in the capillaries and in the viens on the back of the hands.

The loss of weight is gradual, therefore the scales become important, next in importance to the thermometer, as they will be our guide as to the progress of the case.

The early diagnosis of incipient pulmonary tuberculosis is of such vital importance to the patient that every possible means should be taken to recognize the disease before it has made much headway. Failing health, loss of weight with a slight hacking cough, slight indigestion should be looked upon with suspicion, and given a thorough investigation. If necessary use the tuberculin test, and the agglutination and serum methods of diagnosis.

Yellow fever has been removed from our midst, let's all put forth our best efforts and stamp out the white plague.

THE SURGICAL AFTER-TREATMENT OF ANTERIOR POLIOMYELITIS.*

By RAYMOND C. TURCK, M.D.,
Extra-mural Professor of Surgery, Chicago Post-Gradutae Medical School.
Jacksonville, Fla.

Fully ninety per cent of all cases of anterior poliomyelitis in children are certain to terminate with some permanent paralysis and muscular atrophy. To these either contracture or osteo-atrophic deformity is almost invariably added, if the sub-acute and chronic stages are not most carefully handled. Indeed, a careful examination will show that every case of poliomyelitis, in which a primary paralysis was developed, has some permanent deformity, paralysis or muscular atrophy, so slight perhaps that it may not be recognized by the casual observer.

Every case of infantile paralysis is a law unto itself. Practically no two cases are alike. With or without primary treatment we see every possible variation from a slight atrophy of one muscle to a paralysis of all the ex-

*Read before the Medical Association of Florida, May, 1911.

tremities, and we have, therefore, no exact standard upon which to base a comparison of values in the treatment of the acute stage.

Assuming the the disease is an infection urotropin has been used in the acute stage, with a presumed success. Cases again, for which practically nothing was done, other than careful nursing and symptomatic treatment, have resulted as favorably as those in which various therapeutic measures were employed.

Until there has been perfected a specific as uniform and as undoubted as diphtheria antitoxin, for instance, we must face the consequences of infantile paralysis, and direct our efforts, first, to the minimization, and, secondly, to the relief of the inevitable end results of the disease. Much can be done in the sub-acute stages of poliomyelitis by prophylactic treatment. As Painter states, "The object of such treatment is to restore as great a degree of power in partially paralyzed muscles as it is possible to secure; to keep up the blood supply to the affected limb to as nearly that which is required for healthy functioning muscles as is possible; to substitute for the impossible active exercise of the joints, muscles, and tendons, an amount of passive exercise which shall in some measure approximate it; to preserve the balance between opposing muscle groups as long as possible by insisting upon motion of joints in which contracture is likely to occur, in order that tenotomy may be forestalled; to prevent the development of deformities which are disfiguring in themselves and cause permanent impairment of joints through interference with their function."

Deformity following poliomyelitis is in most instances due to the contraction and shortening of a functioning muscle or muscle group, because of the paralysis in whole or in part of the opposing muscles. True joint stiffness is rare. If present it will be found to be the result of primary muscle or tendon contraction; the consequent absence of joint function resulting in contraction and inelasticity of articular ligaments, and sclerosis of articular membranes.

The intelligent and persistent employment of massage, joint manipulation, passive and active muscle stretching, with correction and retention apparatus, if indicated, will prevent contracture deformity in practically all cases.

Fortunately, the only other type of poliomyelitis deformity, that of actual non-development or atrophy of bone, is now infrequent and is only found in the very severe cases of almost complete paralysis, or in cases in which no effort has been made by the attendants to stimulate nerve function and blood circulation, or in cases in which no active exercise has been taken by the child itself.

Poliomyelitis paralysis is characterized always by its peculiarly "spotted" distribution. A total loss of function in a limb or limbs is practically unknown, the paralysis affecting muscle groups or one of several separate muscles, and in many instances merely portions of muscles. There is very rarely a total paralysis of any one nerve, the atrophic or degenerative process in the cells of the spinal cord is almost never localized, but is more or less scattered, so that there is a consequent loss of function of nerve fibres, seldom of nerves in their entirety.

This condition was almost clearly shown in one of my recent cases, in which there was a total paralysis and atrophy of the tibialis anticus, a partial paralysis with atrophy of the lower portion of the extensor longus hallucis, and complete function in the extensor longus digitorum, all of these muscles deriving their nerve supply from the anterior tibial nerve. The other branch of the peroneal nerve, e. g., the musculo-cutaneous was entirely unaffected.

This uneven or "spotted" paralysis is to my mind a distinctive diagnostic feature, when working with those late cases in which the early history is lost.

In approaching the purely operative treat-

ment of poliomyelitis, deformity is naturally the first consideration. I wish to repeat, however, that the ideal treatment of deformity in poliomyelitis is prophylactic. In the neglected cases, or cases in which contracture occurs, in spite of preventive measures, deformities, especially those of the ankle and knee may be successfully corrected by one or several of the means at our disposal.

Of these measures tenotomy is the most widely employed and most valuable, if used with due regard to end results, and if based upon a sound knowledge of existing anatomic conditions.

Indiscriminate tendon cutting often does more harm than good.

In general, I have abandoned subcutaneous tenotomy, and indeed in all cases in which the gap between the cut ends of a tendon will exceed three-quarters of an inch after the deformity is over-corrected, I no longer do the classic tenotomy, since with aseptic technique the open skin incision and tenorrhaphy is so much superior.

It is true that squarely cut tendon will occasionally regenerate sufficiently to bridge a gap an inch or more in length, yet in an annoying large percentage of such operations we meet with weak union, with painful tendon callus, with distressing adhesions, or with a tendon scar which stretches badly under strain.

Open incision, always at one side of the tendon, that protrusion of tendon sutures, and union of tendon and skin may be avoided, with one of the tendon lengthening procedures, preferably the method of Anderson, or the Z cut of Willett is practically certain to secure the desired result.

In adults, and in the resistant types of tarsal deformities in children, astragalectomy, or the Phelps operation may be necessary; occasionally osteotomy is required, particularly in marked cases of knock-knee, and rarely resection of the elongated femoral condyles may be indicated in cases of long standing knee flexion.

Having corrected the deformity we have then to consider methods for restoration or improvement of function. I believe that in these cases of operative deformity correction in the young, we should consider them and manage them exactly as we do the cases in which deformity has been prevented by other means. That is, every effort should be made to prevent further deformity, nerve and circulatory function should be stimulated, and every means utilized to assist in the generation of as great a degree of power and usefulness in the child's muscles as possible.

As a rule, no plastic muscle, tendon or nerve operation should be attempted until at least five years after the initial attack. As much time as this, at least, should be given the child for the regeneration, growth and development of partially paralyzed muscles. In this period, too, active muscles of action similar to muscles paralyzed will be taught to take on, in part at least, the work of those paralyzed.

In this period artificial means of support should be discarded whenever possible, that the child in its active exercise may be forced to a maximum muscular development. It is surprising how readily a young child will adapt itself to existing conditions and how rapidly this interchange of muscle function is developed. The manner of walk, romp or run is unusual, and this is always a matter of grave concern to the parents and other observers, but should be disregarded, care, of course, being given to deformity prevention until the maximum strength development has been attained.

After adolescence body growth is usually out of proportion to increase in muscular strength, and since a large proportion of cases of infantile paralysis begin before the age of seven, it is the period between the ages of ten and fourteen that plastic work is most satisfactory and most successful, first, because of the obvious necessity and, second, because muscle growth and coordination has reached its maximum of development.

Impairment of the action of the knee, ankle and tarsal joints offers a wide field for the successful transference of energy. This may be accomplished by the transplantation of the tendon of an active muscle, in whole or in part, to the tendon of a paralyzed muscle, by shortening elongated tendons; by direct transplantation of active tendons into fascia, periosteum or bone, so that the transferred muscle will pull in any desired direction or will supplement a partially paralyzed group; by lengthening active tendons or by diverting their action with strands of strong silk running from tendon to any desired insertion. Silk strands thus utilized, not only act in themselves, but form a trellis along which there is a true tendon proliferation.

In the ankle and foot, loss of ankle flexion and tarsal abduction and adduction are greatly benefited by proper tendon transference.

It is very exceptional that we find a case with a total paralysis, or so decided a paralysis of the extensors and abductors that by careful study we cannot find suitable material for energy transference. In a decided paralysis, arthrodesis of ankle, and if need be of the medio-tarsal joints will meet the requirements. In paralysis of the muscles of the calf, however, there are available no muscles of sufficient strength to replace the soleus and gastrocnemius, and arthrodesis is the only operative procedure of certain value.

At the knee we find the greatest percentage of paralyses to be in the quadriceps extensor. This condition may be greatly improved by an anterior transplantation of the biceps and semi-tendinosus, and if necessary the sartorious and gracilis may be transplanted into the lower fibres of the quadriceps. In true flail joint, permanent ankylosis of the knee will usually permit the discarding of braces.

At the hip deformities may be corrected, but plastic procedures are not satisfactory. Nor are we ever certain of securing a bony ankylosis, hence we must depend upon some mechanical device.

In the upper extremities, permanent impairment of function following poliomyelitis is relatively rare, and for this reason plastic operations upon muscles and tendons, other than tenotomy and tenorrhaphy for the correction of deformity have not been as well developed as those of the lower limbs. With a wealth of muscular and tendinous material, especially in the forearm, there is no reason why proper tendon transplantation, based upon a careful determination of existing function and paralysis, and a sound knowledge of normal muscular action, should not be as successful and satisfactory in the upper as in the lower extremity.

So far as the lower limbs are concerned, the transplantation of active nerves or nerve slips to paralyzed nerves in poliomyelitis has many disadvantages. Success is very uncertain, even when a positively active nerve is used, and in poliomyelitis, owing to the "spotted" distribution of non-functioning nerve tissue, we can never be absolutely certain that we are transplanting functionally active nerve fibres. Again while we may gain a certain amount of function in a paralyzed muscle, yet we must at the same time decrease the action of the muscle from which the nerve fibres are taken. The aggregate of the remaining function and the restored function is never as great as the function in the active muscle before nerve division.

In the forearm, perhaps, nerve transplantation has its particular field of usefulness, owing to the fact that in poliomyelitis, as in most other paralyses, the musculo-spiral nerve is often the only one affected. We thus may choose between the median, the ulnar, and the musculo-cutaneous for our slips of healthy nerve for transplantation. Evil consequences may thus be minimized, in case of failure of the new graft, by a careful selection of active nerve slips from among those supplying the muscle group opposing the one primarily paralyzed. Should this graft fail we have at least accomplished something toward the prevention of contracture deformity.

SOME OBSERVATIONS ON THE SURGICAL TREATMENT OF HEPATIC CIRRHOSIS.*

By ARTHUR A. HEROLD,

Pathologist and Assistant Surgeon, Shreveport Charity Hospital; Assistant Division Surgeon, K. C. S. Ry.; Secretary Shreveport Medical Society, etc.
Shreveport, La.

Many writers begin a paper with apologies, oftimes through modesty, but I feel as though with the limited number of cases which I shall relate that I am due you, at least, an explanation. I do not intend to bore you with an extended dissertation on the subject of epiplopexy, but I shall confine myself to a few remarks on the technique, indications and value of operation. My idea is simply to call your attention to a procedure which, I believe, is practically devoid of danger and, in some cases, at least, holds out a chance of doing much good for the unfortunate, water logged victims of atrophic cirrhosis of the liver. Certainly in many cases that are simply palliated a resort to this (I might say) minor operation would not only give a chance for a longer lease on life, but also a more comfortable one.

The operations devised by the various surgeons, especially Morrison and Talma, are, doubtless, familiar to all of you. The main object of the original ones, as well as their modifications, is simply for the purpose of establishing a collateral circulation around the liver, making the omental veins anastomose, in a measure, with the veins of the diaphragm or of the abdominal wall, thereby relieving the portal circulation of some of its burden of forcing blood through the cirrhotic liver. This operation, then, has for its object, the aiding of nature's effort at relief, for any chronic case of this disease will show enlarged abdominal veins, thereby indicating nature's attempt to compensate for the failure of portal circulation. In addition, the liver and the spleen are often irritated and, in fact, partial decapsulation (a la Edebohls) has been suggested; these measures are for the purpose of stimulating the blood supply and aiding collateral circulation, through adhesions.

Narath's modification is a very simple procedure. Corson of Savannah, in the Annals of Surgery, Dec., 1907, wrote a very interesting paper on this method and reported a good result. However, I shall confine myself to cases which have come under my own observation in the Shreveport Charity Hospital.

The first case was a white man, named Foster, aged 38, a carpenter and shingle-maker by occupation, who had been an inmate of Ward 5 for several weeks before I took charge of the service in April, 1909. The interne told me that he had been going "down hill steadily," that he gave a good history of syphilis and alcoholism, that he had been tapped several times and that, of late, he had been having some chills and fever. Examination showed a brownish skin, emaciated subject, with typical hepatic facies, slightly delirious at times; except for an accenuated second sound, heart appeared normal; liver could not be palpated and percussion was difficult till after paracentesis, when diminished dullness was appreciable; spleen was markedly enlarged, extending about 2½ inches below left costal border, abdominal veins prominent, especially before tapping; urine, negative; blood showed no malarial plasmodia.

Under ether anesthesia, which was quite difficult and which was given only after patient had refused to submit to the operation under local, an incision about two inches in

*Read before the Section on Surgery of the Southern Medical Association, Nashville, Tenn., November 9-11, 1910.

length was made, in the median line, just below the ensiform cartilage. The liver was now palpated and found high, hard and nedular. A piece of omentum, with large veins, was picked up and sewed to the external part of the outer sheath of rectus on each side, so as to lie in a plane with the superficial fascia, care being taken to avoid undue pressure in the region of the omental veins. Next, the layers of the wall were sewed around this protusion, just close enough to obviate any possibility of strangulation; the skin was then completely closed. The patient required three tappings within the first two weeks following this operation. He remained with us for about two months longer, when the ascitic tendency seemed to have disappeared; he improved in every way and, instead of being in bed most of the time, he became so active that it was impossible to keep him from going downtown without permission. He finally obtained a position and left without bidding me good-bye; had I known that he was leaving, I should have asked him to let me hear from him. Of course, he had one thing which he did not come with, viz.: an epigastric omental hernia.

The second case was that of a colored male, Perkins, whose history, age, symptoms and physical examination were very much like the other one. I did exactly the same operation on him, without, however, as good results. About a month later I suggested to him a second attempt, under local anesthesia, to which he readily consented. I opened the abdomen a little to the right of the previous incision; the size of the veins of the omentum and the wall was astounding; the adhesions from the first operation were so great and the hemorrhage so profuse that I could not accomplish much; I simply supplemented my previous operation with a little more epiplopexy and closed him up. It has now been nearly a year and Perkins is still living, has to be tapped often and that is about all. For some reason, hard to explain, the operation which had accomplished its immediate purpose failed to confer the ultimate benefit that it had to Foster; perhaps the case was further advanced.

The third case, Nash, was one in which I assisted another operator; he, too, failed to show any marked improvement and later his liver and spleen were scrubbed and some more stitches taken by Dr. Calloway. At last reports he was still living and, apparently, improved. The fourth case, done by still another operator, was not a very advanced one and the work is most too recent to ascertain results.

CONCLUSIONS.

I believe that all well-marked cases of atrophic cirrhosis of the liver should be advised to submit to surgical procedure, informing the patient that it is practically devoid of danger and that there is a chance of prolonging his life and making him more comfortable thereby; also, that he will carry a small hernia with him in the future.

I do not consider results obtained, on the whole, brilliant, but I do not believe that a failure to benefit one of these cases by operation will injure the reputation either of the surgeon or of surgery.

As to the anesthetic: if the kidneys show no lesion, ether is preferable, as general anesthesia permits better examination of the liver and more freedom of work; if evidences of nephritis are present, it is safer to use a local anesthetic and do a simple epiplopexy.

DISCUSSION.

Dr. W. W. Crawford, Hattiesburg, Miss.—"I am sorry to say I cannot offer any enlightenment on this subject. I have seen the operation that has been described and done in the Charity Hospital at New Orleans. I saw the operation done twice one afternoon, but what the results were I do not know. The author of the paper, however, says that some modification of this procedure has been undertaken in the charity hospital, but ten or fifteen years ago it was an absolute failure. He stated further that the operation might be favored or advised in the hands of some few surgeons; that some of the statistics were encouraging in nature. One thing in favor of this procedure is, of course, that it affords relief, and therefore if I had cirrhosis of the liver, I think I should want to have this one chance of getting better."

Dr. J. A. Crisler, Memphis.—"The paper was applicable to my own ideas in this matter. In fact, I have anticipated for several months writing a paper on this subject, but the doctor has forestalled me. I simply want to add to what he has said, that I have had five or six cases of cirrhosis of the liver which were regarded by internists as wholly incurable. We did a slightly different operation from the doctor, but the principle was entirely the same. We stripped off the peritoneal covering from the posterior rectal muscles, stitched the omentum there, in fact stitched everything we could, brought the circulation up to as good condition as we could, and got all of the area denuded that was possible. There were two of these cases in which the dropsical condition was advanced. The ascites was marked and it looked as though they would not live three months. They were tapped a number of times; they gradually got well, and I had a letter not long ago from Dr. Cooper in reference to one case, and incidentally he mentioned reference to another case; stating that Mr. A. was up and was entirely well. This case I had in mind was pronounced absolutely hopeless, and I am glad to learn that the doctor has had such good results."

Dr. E. Denegre Martin, New Orleans.—"It is really in these cases of hypertrophic cirrhosis that we get good results. I have had two cases on which I have operated, in one of which the result was a failure. After looking up the literature on the subject, in the second case, one on which I operated three months ago for hypertrophic cirrhosis, I carried out the suggestion of Narath, simply taking the omentum, bringing it up through the wound and tucking it under the skin, and in this case I had a most marvelous result. If it were not for a nephritis which the man had at the time he would be practically well. The procedure is simple, and can be done under cocain anesthesia, and I feel in the cases where it is indicated we should always do this operation. The main thing is early diagnosis, especially in these cases of hypertrophic cirrhosis which are the only ones, I understand, in which we can expect results."

Dr. Herold (Closing the discussion).—"Dr. Martin has referred to cases of hypertrophic cirrhosis in which good results are obtained, but my case in which I obtained an excellent result was one of atrophic cirrhosis. In these hopeless cases it is well for us to operate, as we cannot do much by the administration of medicine."

GUNSHOT WOUND OF ABDOMEN AND CHEST, PENETRATING STOMACH, LIVER AND LUNG. Report of Case With Remarks on Treatment.*

By F. G. DUBOSE, M.D.,
Selma, Ala.

CASE REPORT.

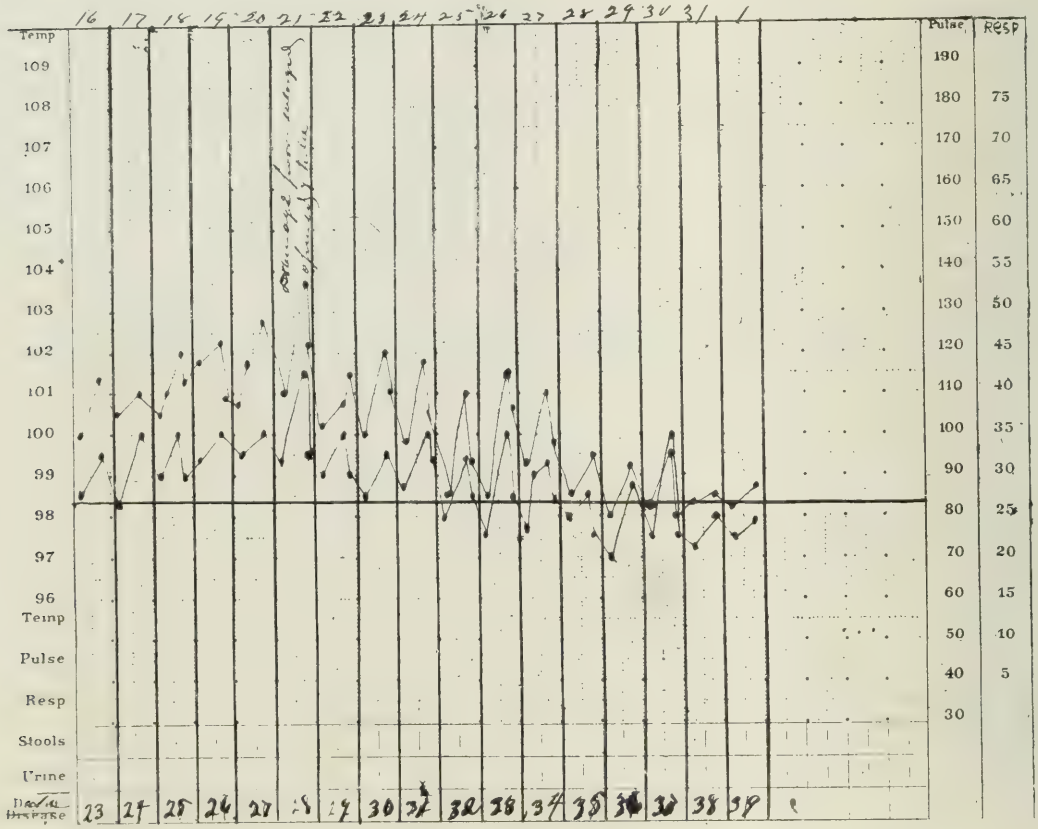
Fleming Harrison, colored, male, age 24, referred by Dr. Fielder of Benton, Ala. While on horseback he was met on Dec. 25, 1909 (at 11 a. m.), by a fellow of color who took a shot at him with a 38 calibre pistol, the bullet entering his left side. The man doing the shooting was on foot and the range of the bullet was upward. After riding two miles down the road, he fell from his horse and was taken by friends to his home, where he was first seen by Dr. Fielder. He had vomited considerable blood and his physician knew beyond doubt that the bullet had penetrated the stomach. He was given a hypodermic of morphine and atropine and put on the train that night and brought to the DuBose Sanatorium, arriving at 11:30 p. m. When first seen he was weak and severely shocked, skin cold and clammy, radical pulse thready and almost imperceptible. He was immediately prepared for operation and hypodermoclysis begun during the preparation and anaesthesia. Ether by the drop method was administered by Dr. Chisholm.

The incision was made from the ensiform cartilage obliquely downward and outward to a point three inches to the left of and on a level with the umbilicus. Blood and blood clots were turned out of abdomen and the stomach drawn in the incision. The anterior wall of stomach was slit for two inches by the bullet in entering the stomach and a small, round opening on the border of the lesser curvature showed the point of exit. The edges of these wounds were trimmed smooth and united with first a Connell suture and two overlying rows of Lembert sutures, Pagenstecher linen was used for the first two and catgut for the last union of peritoneal sur-

*Read before the Section on Surgery of the Southern Medical Association, Nashville, Tenn., November 9-11, 1910.

faces. The under surface of the left lobe of the liver was oozing at the point of penetration of the bullet, the course of which could not be followed further. The peritoneal cavity was flushed with saline and freed from blood clots. The wound of entrance of bullet was wiped clean and here it was seen that in going between the seventh and eighth ribs the seventh rib was struck by the bullet and under the skin during the course of the operation. The needle being introduced along the margin of the pectoral muscles. The oedema thus produced interfered with the locating of the bullet, which was found subsequently underlying the skin in the midaxillary line on a level with the right nipple.

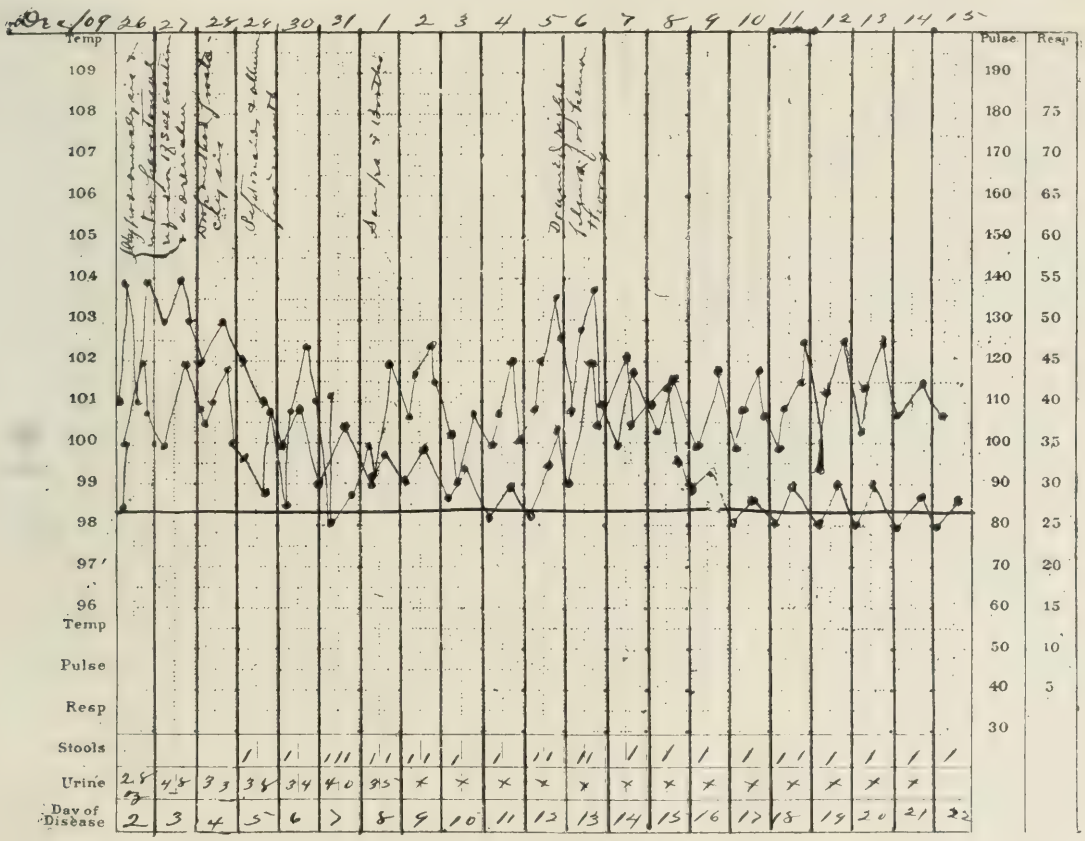
The operation was terminated in thirty-five minutes and the man put to bed in about the



veered its course downward; its impact against the anterior surface of the stomach changed its course again upward and to the right. A stab wound was made and a soft rubber drainage tube inserted in the left iliac region to take care of subsequent oozing of blood or serum. The incision was closed in layers reinforced by silk-worm gut carried below the aponeurosis.

Two pints of normal saline were introduced same physical state as when the operation was begun. At 5 o'clock in the morning he became cyanosed, labored respiration and apparently dying. He rallied under hypodermoclysis of normal salt and adrenalin solution. In four hours his condition again became grave and a pint of hot saline with thirty drops of adrenalin was introduced through the drainage tube into the peritoneal cavity and the tube clamped. Strychnine,

morphine and atropine were given hypodermically. Coffee and salt solution, four ounces of each, was administered per rectum and retained. He reacted promptly and continued to do well the temperature falling and the frequency of the pulse decreasing. His bowels moved well on the fourth day and he was allowed nourishment by the mouth, given peptonoids and albumen at first, then broths



and soup. He continued to do well till the twelfth day following the operation, when he suffered from dyspnoea, coughed incessantly and his temperature rose to 103.5 Fh. and pulse to 124. Examination revealed some emphysema of the skin over right lung and flatness or percussion over lower two lobes. It was during this examination that the bullet was found just under the skin in the mid-axillary line, on a line with the right nipple.

The bullet was removed under local anaesthesia, and an incision made between the sixth and seventh ribs in the anterior axillary line. About two quarts of old blood and serum were evacuated through this opening and two thick walled rubber drainage tubes were inserted into the pleural cavity for drainage. This cavity was flushed with alkaline and antiseptic solution daily. The cough lessened. The temperature and pulse dropped and he continued to do splendidly till Jan. 21, 1910, when drainage became imperfect and the temperature again rose to 103.6 Fh. A larger opening was made and larger tubes introduced. From this on his condition improved, but the chest drainage continued until July, when the wound closed and the man has enjoyed robust health since.

The lung has expanded and now fills the

right pleural cavity. The bullet in its course passed through stomach, liver, diaphragm and right lung.

The fact that this man's stomach was empty when the injury was received lessened the chances against him. The beginning of hypodermoclysis as soon as the man was brought to hospital; the immediate and rapid repair of injuries received; the introduction of a rubber drainage tube just within the peritoneal cavity to take care of oozing and in an emergency to introduce salt solution and adrenalin chloride within the peritoneal cavity, all were factors perhaps essential to the successful termination of this case.

The shock in these cases must be combated by every available measure and while this is being done the operation should be well under way. It is a mistake to wait till the condition of shock is relieved, for the opportunity to save life will frequently be missed. Hemorrhage, escaping visceral contents, are factors producing shock as well as the direct effect of trauma in the peritoneum and viscera. The longer, too, that bowel or stomach contents remain in the free peritoneal cavity, the surer infection will follow.

Location and frequently extent of injury can be measured by the character of the vomitus, or the catheterized urine, or by inserting a rectal tube; the show of blood in any of these will demonstrate injury to the parts or part examined. Further than this, the diagnosis of extent of injury should be made after the abdomen has been opened, by thorough, painstaking but rapid search of the viscera.

Rapid work, careful protection of exposed intestines, thorough and painstaking after-treatment, will tide over the chasm some almost hopeless cases.

A REVIEW OF FIFTY-EIGHT CONSECUTIVE OPERATIONS FOR FIBROID TUMORS OF THE UTERUS.*

By EDWARD G. JONES, M.D.,
Atlanta, Ga.

The operations analyzed represent all my own individual work. They are consecutive. Every patient presenting herself was operated upon.

The list comprises:

Abdominal hysterectomies	52
Abdominal myomectomies	2
Vaginal myomectomies	3
*Celiotomy without removal of tumor	1
Total	58

*Evident sarcomatous degeneration with involvement of mesenteric glands.

AGE.

The youngest was 21; the oldest 54; the average was 36.

I. PRIOR SYMPTOMS

First: *Pelvic pain*—

41 complained of such pain.
6 did not so complain.
4 had pain irregularly.
7 no record made.

Unless there were complications, such as pyosalpinx, adhesions, etc., the pain was usually more of a pelvic discomfort than a positive pain. Of the six patients who did not complain of pain—

One had a moderately large subperitoneal and three or four small interstitial tumors; two had protruding polypi only; one had a single large subperitoneal myoma; one had only small interstitial tumors; the remaining history gives no information as to the kind of tumor, but the presumption is in favor of sub-serous growths as there was no irregular or profuse menstruation.

Second: *Hemorrhage*—

No record ..... 8 patients

*Read before Medical Association of Georgia, Rome, Ga., April, 1911.

Irregular and profuse	19 patients
Neither irregular nor profuse	16 patients
Irregular	7 patients
Profuse	8 patients

Of the fifteen women who did not complain of hemorrhage numbers 1, 5, 8, 15, 21, 41, 47, 51, 57 and 58—eleven in all—had either single sub-serous tumors, or one or two more or less large sub-serous tumors and small interstitial growths; the remaining five were uncomplicated cases, though no record was made as to the location of the tumors.

Third: *Leucorrhoea—*

No record	8 patients
Marked leucorrhoea	34 patients
Slight leucorrhoea	4 patients
No leucorrhoea	12 patients

It may be noted that, with two exceptions (Nos. 4 and 37), the twelve women who had not marked leucorrhoea were the same women who had no profuse or irregular hemorrhage; and in case of the two exceptions the hemorrhage is recorded as profuse but not irregular —which may have been normal for these women.

Fourth: *Vesical irritation—*

No record	8 patients
Troublesome irritability	34 patients
No irritability	16 patients

Fifth: *Abortions and miscarriages—*

I have data as to the bearing of children by 40 of these women. Three of the 40 were unmarried and had no children. The remaining 37 have borne a total of 60 children with a total of 51 abortions or miscarriages.* Thirteen of the 37 have never been pregnant to their knowledge, their ages at the time of operation being 34, 26, 40, 34, 44, 35, 45, 26, 24, 36, 30, 45, 36. These thirteen, with two exceptions, had profuse or irregular hemorrhage; and the two exceptions probably had submucous tumors.

*Patient 54 claims 24 miscarriages during last 17 years.

Four have aborted or miscarried oftener than they have gone to term; all four of these had marked metrorrhagia.

Nine have borne two or more children with no miscarriages or with relatively few miscarriages. Of these nine, Nos. 2, 8, 36 and 55 had the tumor appear some years after the last child was born; in case of Nos. 37 and 55 the tumor is recorded as being intraligamentary; No. 39 was 43, No. 20 was 48, No. 55 was 41 and No. 54 was 39 years old, so that presumably they bore the children before the tumor began to grow; in No. 33, aet. 32, no explanation appears.

II. POST-OPERATIVE HISTORY.

First: To the question, "Is the general health satisfactorily improved since the operation?" the answer is:

Yes, for all patients reporting (50).

Second: Is there a hernia in the wound?

Information is at hand respecting all but seven patients. No hernia has developed in any instance.

Third: At any time since the operation has there been a bloody vaginal discharge, and, if so, how many separate times has this happened?

There is no information from nine patients. Of the remaining 45 upon whom hysteromyomectomy was done (omitting myomectomies, etc.) a bloody discharge simulating menstruation is reported—

Few times by	1 patient
Once by	3 patients
Three times by	1 patient
Twice by	3 patients
Four times by	1 patient
None by	36 patients

Fourth: Does the patient suffer from troublesome leucorrhoea which was not present before operation?

No information is at hand from eight patients. From the others a negative answer has been received except as follows: In three patients (Nos. 10, 43 and 55) the leucorrhoea continues about as before operation, and in two (Nos. 42 and 53) leucorrhoea is still present, but less troublesome than before.

Fifth: Does the patient suffer with bladder irritation now?

There is no information respecting seven patients.

Nine complain of slight—none of severe—irritability. With a single exception (No. 27)

these same nine patients complained of vesical symptoms before operation. The remaining women report no trouble.

Sixth:

(1) Does this patient now, or did she for a while, suffer from natural menstrual discomforts monthly without actually menstruating?

(2) Did the nervous and circulatory disturbances of the menopause follow the operation, and, if so,

a. How soon after the operation did they begin to appear?
b. How long did they last?
c. Were they more seevre or less severe than the symptoms of the natural menopause?

I have been very anxious to get just as accurate information as possible upon the question of the effect on the general health and on the menstrual function in these operations of leaving both ovaries or one ovary.

I do not discuss here the *advantages* of leaving good ovaries or the advantages of removing bad ovaries. In this series of cases the ovaries have usually been left if their condition seemed to warrant it, though very frequently their condition indicated that removal was wiser, and it was done. Operators of experience almost universally note the presence of pathologic ovaries with uterine fibroids, so that their ablation is perhaps wise in the majority of instances. The younger a woman the more careful I have been to leave one good ovary if possible.

Of course, usually, probably always, unless some *corporeal endometrium* be left by a rather high amputation the actual flow of blood at the menstrual period will be stopped promptly, as previously noted in this review, whether the ovaries be left or not; but whether the other menstrual phenomena persist through the natural menstrual life when one or both ovaries are left is affrmed by some and denied by others—presuming the ovary or ovaries to be fairly normal.

The truth appears to be that too little reliable study has been given to the subject in question, the profession taking largely for granted what is probably true, viz.: that the preservation of good ovaries *does* postpone the disturbances of the menopause—without actually knowing this to be so.

My efforts to get the truth with regard to these questions from the patients here discussed have been somewhat disappointing up to date. It has been the subject of correspondence for more than five months with the result that the information obtained is not of strict scientific value. With doctors, as well as with patients, the post-operative amenorrhoea is too frequently confused, and made synonomous, with the actual menopause. Respecting this series of patients, I can only say at present that the information at hand seems to support the theory that retention of one or both ovaries will avert or postpone the artificial menopause.

Such information as I have received also indicates that when the menopause is brought on artificially by removing both ovaries the symptoms experienced are less severe than with the natural menopause.

Three patients apparently passed the menopause before operation, though two of them still had hemorrhage.

One of the two upon whom abdominal myomectomy was performed (the other having reached the menopause before operation) was 36 years old at the time. Three years afterward—rather early—she began to experience the symptoms common to the climacteric.

Nos. 55, 56, 57, 58 both of whose ovaries were removed, and 53 in whom a part of one ovary was left, were operated on too recently for information to be valuable.

Seventh: Has any serious mental disturbance developed?

No patient has shown such symptoms.

Eighth: Is there pain which may be due to abdominal adhesions?

No information received from eleven.

No. 5 operated on, aet. 36, four years ago, is thought by her husband, who is a physician,

to have chronic appendicitis. She is passing the menopause now. No. 10 complains of vague pains in the left iliac region. Nos. 12, 26 and 43 answered yes to the question; these were all clean cases and no explanation is offered. A number of other patients who I would expect, rather than the above, to have such pain because of adhesions, pelvic peritonitis, etc., evident and troublesome at operation, seem surprisingly clear of it.

Ninth: Is there any unfavorable symptom not present before operation?

There is no report of twelve patients and three were operated on too recently for their answers to be valuable. No. 4 operated on in 1907, has some swelling in his left leg when standing—a relic of a post-operative phlebitis.

One patient died about a year after operation (previously mentioned).

I omit purposely a discussion of technic except to say that experience has led me to be more and more careful to suspend the cervical stump (if left) by the round ligaments or by the gathered peritoneum of the broad ligament—a few patients complaining of bearing down sensations when no specific attention has been given this point.

Bisection has been practiced in some instances—when it seemed to promise better protection to the ureters, or when the tumor could not be delivered without difficulty or danger of inaccessible hemorrhage.

Supravaginal amputation has been the usual procedure, the increased mortality of complete hysterectomy more than outweighing the immunity from cervical cancer acquired by the more radical operation.

In the recent cases the blood pressure has been taken at frequent intervals during anesthesia and operation. Omitting temporary variations, there has been in general a gradual decline during the actual intra-abdominal operation, though in no observed instance had the pressure fallen to the point of shock.

With few exceptions, the gall bladder has been examined by palpation in all these operations. In no case have gall stones been discovered—a finding not in accord with the common teaching of internists, especially since cholelithiasis is a woman's disease and these fifty-eight women averaged middle age.

COMPLICATIONS.

The following operative complications are noted:

Extensive adhesions	12 cases
Moderate adhesions	17 cases
Large, proliferating ovarian cyst	2 cases
Intra-ligamentary fibroids	7 cases
Bilateral intraligamentary cysts	1 case
Ureter over tumor	1 case
Dermoid cyst	1 case
Single intra-ligamentary cyst	1 case
Sloughing tumor	1 case
Appendix adherent (removed)	11 cases
Cystic degeneration	1 case
Pregnancy (six weeks)	1 case
Pyosalpinx	2 cases
Umbilical hernia (repaired)	3 cases
Hyperthyroidism (ex goiter)	1 case
Extreme obesity	2 cases

The mortality in this series of cases is not such as, of itself, to claim favorable comment—four patients having died—though it is perhaps not above that in the ordinary run of complicated and uncomplicated cases. There has been one death in the last thirty-eight operations.

No. 9, aet 44, died 60 hours after operation from paralytic ileus. This patient should not have been operated on in her then condition. At present I would do a preliminary blood transfusion. She had known she had the tumor for fourteen years; during most of this time hemorrhage had been prominent and for the last three years very profuse so that she was practically exsanguinated. Her pulse was 120 almost continuously after she came under my observation and the hemorrhage continued. The tumor was large and sloughing. It was removed quickly, but she did not rally.

No. 14, aet. 32, had a number of fibroids matted together with abdominal viscera. The operation was concluded in a comparatively short time with little evidence of shock, but with considerable trauma by reason of the adhesions. The patient died suddenly 30 hours

after operation with characteristic symptoms of pulmonary embolism.

No. 20, aet. 48, was known to have albuminuria before operation. Continued hemorrhage demanded interference, and the patient died with the usual symptoms of urinary suppression.

No. 39, aet. 43, had a tedious operation on account of extensive and dangerous adhesions. Thirty-six hours after operation she was seized suddenly with tachycardia. Hemorrhage was positively excluded by a number of symptoms at the time and by the subsequent history. Her condition remained critical for three or four days. At the end of five days she seemed out of danger. On the eighth day the wound was carefully examined with the view of discovering infection. It was perfectly clean; the same afternoon she coughed, the wound opened and the intestines were somewhat soiled. No pus appeared. The tachycardia appeared again, and the patient died in 30 hours without any characteristic evidence of peritonitis. I did not personally see this patient after the third postoperative day, being away from the city. She had no gross cardiac lesion, though an undiscovered myocarditis may have explained her symptoms.

DISCUSSION.

Dr. S. T. Barnett, Atlanta.—"In making the amputation was the cervix included? I had the misfortune to lose two patients, owing, I believe, to the fact that the blood was impoverished; the hemoglobin percentage was so low that the women had no chance to survive the operation. They should have been given the opportunity to have the hemoglobin percentage brought up.

Dr. J. L. Campbell, Atlanta.—"I consider the care of the ureters as very important in these operations. I have found that giving methylene-blue twenty-four hours prior to the operation will stain the ureters a deep blue; since using this method I have never cut or tied the ureters. This method is valuable in operating on intraligamentous tumors where the tumor is between the broad ligament and the ureter. The patients on whom I have operated have experienced considerable trouble after their periods. I believe in leaving all the ovarian substance possible."

Dr. Floyd W. McRae, Atlanta.—"There is no danger to the ureters if one keeps close to the tumor he is removing. A careful surgeon never cuts or ties a ureter. I am interested in the way Dr. Jones has followed up the histories of his cases. We do not want to know merely whether the patient survived the operation, but we do want to know what the condition is three, four or five years afterwards. I, too, wish to emphasize that we should leave as much of the ovarian tissue as possible."

Dr. E. G. Jones, Atlanta.—"Supravaginal amputation has been the operation of choice; I do not think that the mere fact that a woman has a cervix calls for its removal in these cases. In dealing with the ovaries as much of them should be left as possible; but, as a matter of fact, if one or both ovaries suffer from a surgical lesion and are left it shows bad surgery on the part of the operator.

SURGERY OF THE OVARIES*

By J. A. CRISLER, B.S., M.D.,
Memphis, Tenn.

Prof. Clinical Gynecology Memphis Hospital Medical College; Formerly Prof. Anatomy and Operative Surgery, College of Physicians and Surgeons, University of Memphis, etc.

Papers written for medical societies are usually intended to be instructive and to elucidate some real or fancied tangle that the essayist has sought to unravel and thus add to our sum of knowledge. I come before you with a different plea my aim being to stimulate a discussion upon what appears to me to be very important points in ovarian surgery, in which direction our efforts have not compared as favorably as in the surgery of many of the other organs, nor, indeed, do I grant that the surgeons of the world have been as careful and as conscientious in the handling of some of the conditions that I will mention

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as their skill and results in other lines of surgery would warrant us in assuming. I refer more particularly to that condition of the ovary, which might be roughly termed semi-pathological, under which head, if you please, I would embody such conditions as prolapsus, congestion, edema, simple cysts, hematoma within a corpus luteum and that unknown quantity producing a condition which the Germans term "Mittelschmerz."

I am thoroughly satisfied with the pathology, histology and surgery of the more major conditions of the ovary that is accepted in relation to the large cyst adenomata or so-called pseudomucin cyst and of the larger multilocular serous cysts with their papillomatous complications and malignant tendencies, nor do I intend to discuss these proliferating cysts or dermoids or teratoma. I am, likewise, satisfied with our knowledge and behavior toward the solid tumors of the ovary, such as fibromata, fibromyomata, papillomata, careinomata and sarcomata. All of these major cysts and tumors have had their share of careful consideration and the surgery today, that is done for these conditions, ranks favorably with the surgery of any of the other organs and pathologists and surgeons generally, accept the present day interpretation of our knowledge bearing upon these, as well nigh correct.

In dealing with minor troubles of the ovaries, however, which are by far the most frequent ones that nowadays comes to the operating table, much more needs to be done in the way of careful, painstaking study, coupled with clinical evidences, before the last word shall have been successfully said. Modern surgery has swept the way comparatively clean of the major conditions, until today the old-fashioned ovarian cyst with its emaciated patient and tell-tale "facies" is quite uncommon and the large serous cysts with their pecliar papillomatous ingrowths stabbing through them are sufficiently rare to attract attention, but the ever present semi-pathological conditions of the minor sort, finds its way constantly to the hospital to be dealt with by surgeons, whose regard for the ovary might be exercised, if a different pathology and surgical status could be established, but who now stand apart in two groups, the larger of which is willing to sacrifice every ovary on the slightest excuse or provocation, while the other or smaller group hesitates to attempt any positive effort toward relief. I have pondered over the economic side of the question quite carefully and I have concluded that these two adverse groups remain separated for want of an adequate pathological understanding, that can be demonstrated macroscopically.

Upon this plea I come to ask for an interchange of ideas, hoping not alone that I may be shown a conscientious way, but that others of us may also awaken to a clear understanding and a more conscientious attitude, if perchance they are not already satisfied with what they know about it. As I said in the beginning, I am not trying to instruct, but to be instructed not hoping to teach, but to learn. Before me are men through whose fingers and under whose inspection pass more than thousands of ovaries each year, and judging you by myself, I cannot feel that you are entirely satisfied with your attitude toward these organs. I am grieved to state my opinion, that many years will come and go before we are enabled to pass corect judgment upon many of these ovaries that have brought our patients to the operating table. The more I study their histology and pathology and compare it with the physiology of these organs, the more densely I become entangled into the meshes of uncertainty. At the expense of humiliation, I beg to recite some things that I do not know concerning this question. I do not know why a superabundant growth and enlargement of graafian follicles, which increase the ovarian tension, gives great pain to some women and none to others. I do not know why a corpus luteum, which fails to undergo proper degeneration and absorption, but re-

tains its physiological hemorrhagic contents and may finally undergo calcareous degeneration forming the so-called ovary stone, will bring some women to the operating table, while it can be found in other women, who never have the slightest ovarian discomfort. I do not know why these simple cysts may or may not develop into cystadenomata or serous cysts with malignant tendencies. I am aware of their accepted foci or origin, but I do not know whether these cysts, appearing simple at first, may or may not develop into these more decided pathological conditions. When a woman comes to me with great pain in her ovary, to which no infection can be traced, who suffers before and after her menstruation and in between times, I cannot tell, upon exploratory incision, which ovary is at fault by any macroscopical examination. On the contrary, upon many occasions I have found the ovary of which the woman complains and which is tender upon bimanual palpation, to be in appearance upon celiotomy, entirely normal, while the other ovary may contain a hemorrhagic area half its size. When both ovaries are giving constant pain in a woman who is not necessarily neurasthenic, rendering her practically incapable, it is strange, when the abdomen is opened, that both ovaries may appear as good or better than those noticed in a previous case that were not giving any trouble. I say I do not know whether to resect a portion of them in the hope of relieving the congestion and retention of large graafian follicle cysts or whether to remove them entirely or whether to merely puncture the cysts or to keep hands off and to confess absolutely ignorance upon the subject and convict the entire profession of inefficiency, basing the proposition upon the present day literature upon the subject and of our inability, by any known means, of differentiating the good from the bad macroscopically or clinically.

I do not know why the removal of these ovaries will bring perfect relief to some women who do not seem to miss the so-called "internal secretion," while in others a series of the most violent and unpleasant symptoms follow the procedure, regardless of the age of the patients.

For a case in point, a married woman, age 22, was brought to me by her father, who was a very intelligent physician, suffering with "Mittelschmerz," and with excruciating pain just prior to, accompanying and shortly after menstruation. There was no history of infection of any character. No departure from the normal could possibly be recognized upon a most careful examination beyond the fact that great ovarian pain was elicited from pressure. Upon opening the abdomen the right ovary was found to contain a rather large corpus luteum, filled with a blood clot about the size of a partridge egg, but was otherwise normal. The left ovary had every appearance of being normal in size, color and consistency. The right ovary was removed and the large graafian follicles were punctured in the left ovary. The patient's health was perfectly restored and no more trouble was present for a period of ten months, when she returned suffering as before, except the pain was confined entirely to the remaining ovary. I again opened the abdomen and carefully examined and studied the condition of the remaining ovary, but was wholly unable to discover any reason for the pain. The woman was anxious for children and so were her husband and father, yet her father assured me that if the ovary was not removed, he feared that she would become addicted to the constant use of morphine and upon his advice and my own inclination, I removed the ovary, uterus and tubes. Her recovery was complete; she has not suffered a moment's discomfort since the operation; she did not have to pass through the horrors of the so-called artificial menopause; has gained twenty pounds in weight and is a strong, healthy, plethoric, satisfied, happy woman.

Five other cases absolutely similar in all

the essentials to the one mentioned occurred in my practice in two years and the results were the same. One other case, presenting identically the same clinical findings, was operated upon with entirely different results. The patient grew morose very rapidly, began to show a decided decline in her mentality and finally lapsed into a condition in which she was practically a mental imbecile. She was placed in a sanitarium for a year and while she even forgot the names of her children, her physician informed me that she was constantly mindful of my efforts in her behalf, speaking of me always in a most pleasant and agreeable manner. One peculiarity about the case was, that she wrote me a very long letter once each week throughout the entire year with unfailing regularity. At first her hand writing was most excellent, even though she expressed herself in very broken and uncertain sentences. Later on her hand writing became entirely unreadable, presenting the appearance of mere scratches like the hieroglyphics on a pyramid, but she was not satisfied until the letter was addressed by the physician to me and just before the year of her stay in the sanitarium had terminated her writing began to be again readable and toward the last her letters were those of a normal person. When she came home she was anxious to see me and express her regards and good will and seemed as happy as the most satisfied patient could be. She did not recall, however, any of the instances that had transpired since she left my care.

I mention these cases to show the broad contrast that can exist and the uncertainty of the effects of the so-called "ovarian secretion." A comparison was made of these ovaries that were removed and so far as we could tell, by a careful examination, there was relatively an identical similarity between them. The parenchymatous substance and stroma were normally arranged. The cortical surface presented a normal appearance. The vascularity was identical and the pathologists report of the ovaries and uterine scrapings was of no help to us. There were no varicosities in the mesovarium ligament vessels nor in the panpiniform plexus of either side. The corpora lutea were normally situated and distributed. The ovarian tension was not excessive and the color was good and no marked prolapse was present nor were any neoplasms present in the uterine wall and the tubes were normal, so I do not know what caused the pain and its concomitant chain of symptoms.

To come to a few things that I do know, concerning the ovary would, perhaps, be refreshing. I know that an ovary that has undergone complete cystic degeneration or degeneration from hemorrhage or from infection or where that condition has rendered it a veritable shell, containing debris, should be removed. I do know that in readjusting a very prolapsed ovary, the greatest care should be exercised in stitching it to the posterior surface of the broad ligament near its normal fossa, so as not to interfere, in any manner, with its circulation. It is far better to stitch its free border liberally to this ligament than it is to attempt to replace it by shortening its own ligament, through which all of its vessels pass to the hilum. I would suggest, however, that we exercise great caution when we insert a needle into an ovary. Here and there we may find a fibrous area occupying an old corpus luteum. 'Tis best to delicately stitch this surface on the stromatous lines, avoiding with careful deliberation any trauma to the normal virgin cortical area and primordial vesicles. In nearly all cases where a resection of part of an ovary has been done, cysts form that make the results worse than the previous condition. This is not generally known. It is likewise wrong to attempt to shorten the infundibulopelvic ligament without the most careful regard for the important vessels that pass here, for without this care, we are quite sure to produce a varicosity of the panpiniform plexus and increase the congestion of the ovary and even render it edemat-

ous. In other words, exaggerate the very conditions that we had hoped to relieve. Ovarian pain is one of the most common conditions for which women come to us seeking relief.

Of course, we all know the dangers of Neisserian infection to the tubes and through the ruptured Graafian follicles to the ovaries or to the ovaries direct through the utero-ovarian lymphatics. The same can be said of streptococci and other infections and we are all familiar with the best methods of treatment in these cases, but they are more rare than ovarian pain. Many of the modern day surgeons (and in Memphis nearly all doctors are now surgeons) in their ambition to excel in the number of their laparotomies and to enhance their bank accounts bring these to the operating table. That these ovaries are sacrificed unduly one has but to witness the routine of operations in any of the hospitals, where all sorts of surgeons operate. The unskilled stripling fresh from college and interne service in some hospital tries to excel some dashing professor who has "set the pace." Again we see the good, old family doctor, untutored in the ways of surgery beyond a knowledge of the fact that if he does not infect the patient he will not likely kill her, plodding away and pouncing upon a congested ovary, and it is amusing to see him cut open a corpus luteum with its physiological blood clot and run amuck to show it to the husband of the patient with that convincing "I told you so," an air of wisdom that carries conviction to the "man behind the purse." Then we can see the reckless surgeon, who knows better, but who is busy and who hasn't time to be worried with a subsequent complaint from his patient, who smites off healthy ovaries as carelessly as did old St. Peter, when he shaved off the ear of the servant of the high priest. The rarer sight is to see the painstaking, competent, conscientious man studying and pondering with much care and deliberation, as to what is best to do, and frequently finds no satisfactory answer.

I think we can all agree that if the circulation in the uterus and broad ligaments can be improved many of the ills attributed to the ovaries will be greatly diminished. Just here, however, comes the rub. The circulatory system in these parts is a complicated one; a "double header," if you please, and we must be careful in correcting in one place—else we do damage to another. The uterus is the "hub" of this system and if it is retroflected and prolapsed, we may avail ourselves of the operation of Gilliam or Barrett or Baldy or some modification of these and may greatly improve the congested ovaries without removing the panpiniform plexus perhaps.

To do a resection of this plexus, as is so frequently done for "ovarian pain," without due regard for the anatomy and physiology of the veins, is bad surgery. We are too prone to content ourselves here by recalling the termination of the left ovarian vein, when as a matter of fact, this explanation is inadequate.

There are many other thoughts that are equally important, but as the society limits the time strictly, these can be brought out in the discussion, as can also the usual recapitulation.

You will observe I have avoided any reference to authorities and to the literature on this subject. My honest judgment is that we can find no real help in these. Much of the physiology and nearly all of the surgery about this phase of the subject must be revised, leaving out the guess work and avoiding the beaten paths.

We, as surgeons, must conscientiously seek the truth and perfect a clearer understanding.

DISCUSSION.

Dr. Richard Barr, Nashville.—"Dr. Crisler has certainly put before us very clearly the difficulties of this proposition, and I am inclined to think that he has some solution of the problem up his sleeve,

waiting for somebody to make a crack so that he can get at him in his closing remarks. (Laughter.) The question that Dr. Crisler has put before us is one that has given me more anxiety than any other one I have encountered in practice. I am not a believer in the so-called conservative surgery on the ovaries. I do not believe in ovarian resection. I know there is a great deal to be said on both sides, but I do not believe at all in ovarian resection. I do not believe much in puncturing the ovary. Such ovaries do better if left alone. When I say that I do not believe in ovarian resection, I do not mean to imply that every ovary that causes trouble should be removed. It is always a great relief to me when a patient consults me with a pelvic condition to find distinct pathology. I guess it is to all of us, and unless I can demonstrate unmistakably a pathological condition, I discourage surgery. I am not a strong believer in surgery for the minor displacements of the uterus itself and for ovarian displacements. I am inclined to think that what might be called tinkering gynecology will give these patients as much relief as would be afforded by a suspension of the ovary or a suspension of the uterus. Personally, I only do surgical gynecology; but most of these patients are kept in a fairly comfortable condition by more or less continuous treatment, and they prefer that to radical surgery. However, after prolonged efforts at tinkering gynecology, if it fails to yield the proper results and afford relief, if surgery is to be done, my inclination is to do surgical work thoroughly. If I do anything to the ovary I remove it. If I remove both ovaries, by the way, I remove the uterus invariably. I do not leave the uterus where the appendages have been removed, because it is a functionless organ, and I think it should come out. I earnestly hope that Dr. Crisler has a more satisfactory method of handling these cases which he is going to hand out to us when he closes the discussion. My experience has been quite large in this work, and corroborates his, if I may infer from what he said. He has reported most satisfactory results even where he has done thorough surgery, and I am inclined to think that the case he reported should not have been sent to a sanitarium for mental disease. In one case I think he was wrong in drawing the conclusion that this patient went there on account of the operation. I do not believe the operation he performed on this patient had much to do with sending the patient to a sanitarium, because I understand after prolonged treatment this patient did become eventually completely restored. The patient was restored mentally, and she undoubtedly was restored by the operation. He is wrong in concluding that the operation had nothing whatever to do with the recovery of the mental condition. There are pelvic conditions in which it is practically impossible macroscopically to show pathological changes, or even microscopically to observe pathologic lesions in the ovaries or uterus. My opinion is that in most of these cases, where we have persistent pelvic symptoms with demonstrable pathology, and in which the patient is relieved by surgery, the real trouble lies oftener in the uterus than in the ovaries, and for this reason I am positive that where both ovaries are removed the uterus should be removed as well. I do not believe in removing the uterus and leaving the ovaries, and I do not believe in removing the ovaries and leaving the uterus, and in this particular type of cases, without demonstrable pathology, if you remove the ovaries, it is absolutely essential to remove the uterus because you may find after all the pathology or symptomatology may have its origin in the uterus and not in the ovaries, and it is certainly a mistake to leave the uterus behind, since it can do no good, and I think probably will prove to be a source of trouble. I think this paper is a very important one, and the difficulties which confront us in this kind of work have been ably set forth and interestingly so by the author of this paper."

Dr. John A. Gaines, Nashville.—"I want to thank Dr. Crisler for presenting this paper, and to say to him that I am glad there are other men working in the same field who have the same kind of difficulties to deal with that I do. This subject has been a perplexing one to me, and one which I have given, so far as I could, as careful and painstaking investigation as Dr. Crisler has done. His experience is very much like my own. I have attempted theoretically a great many times to explain to myself why certain symptoms produced certain conditions, but to be just as perplexed as the doctor in finding the same condition in some other case, not producing symptoms or the symptoms were present in another case, with practically absence of the pathological lesions. I believe in conservative surgery in the pelvis. If I have a young patient, say thirty-five years of age, I do not like to take out both ovaries. I have had unfortunate results in attempting to leave part of an ovary—in fact, I have had a few cases in which I left an ovary which developed cysts at a later period. We gain a certain advantage when some ovarian tissue is left; the changes take place gradually. I do not agree with the position Dr. Barr has taken altogether, although Dr. Crisler presented the two sides of this subject very clearly. I think, however, Dr. Barr struck the keynote, and I have been more convinced in the last two years, perhaps, than at any other time, that in many of these cases, where we have pelvic pain referred mostly to the ovarian region, it is due to uterine trouble. I think we not infrequently overlook a small fibroid of the uterus near the tubes, or near the ovarian ligament which may cause, perhaps, the trouble. These small fibroids are difficult to find, and frequently cannot be found. I have had a case or two that caused me considerable worry, particularly as regards operation, and in one I did a hysterectomy in which there was a small fibroid, not larger than a hazelnut near the corner of the uterus, it being necessary for the patient to undergo a second operation, and I do not believe for this reason that we should be too radical in our surgery on these pelvic cases. It has been my experience that in a great many instances by suspending the ovary—and I never sew the ovary in position—we can do a great deal of good. I do not recall the originator of this operation, but doubtless some of you will remember it, and that is, to shorten the round ligaments by bringing them through underneath the ovarian ligament behind the uterus, tilting the round ligaments forward and lifting them up, thus holding the uterus in position and the ovaries up so that the congestion is relieved. For

the last year and a half, after having had a talk with Reed, of Cincinnati, I have followed his suggestion, and instead of cutting out the ovary or puncturing it, I take away the top of the ovary and leave its secreting structure; I do not allow it to close so that recurrence can take place, nor scrape out the sac of the follicle so as to produce a raw ovarian surface, possibly causing a greater scar. I have had satisfactory results in cases I have treated in that way. This method has given me as much satisfaction in ordinary cysts of the ovary as anything I have done, but I must say that as long as I can save a small part of an ovary in a woman under thirty years of age I shall do so. There are only certain conditions in which there is infection of the uterus, and when this organ is infected we should remove it."

Dr. E. Deñegre Martin, New Orleans.—"I have been very much interested in Dr. Crisler's paper. In the past two years I have had three curious experiences; I have never reported these cases before, but have referred to them in speaking to other physicians. One surgeon told me that he had had similar experiences. I have had three ovarian cysts to follow partial resection of ovaries within six months."

Dr. Gaines.—"I have had four."

Dr. Martin.—"These cases have put me in the position where I will not do partial resection of an ovary unless I feel it is badly diseased, and the woman is young and wants to have a child. Then I think the operation is justifiable. In a condition where the ovary is badly diseased, nothing at all is to be done except to take it out. In each of my three cases the ovary was large enough so that a diagnosis could be made through the pelvis. There were symptoms of pain and pressure, and on account of having these three cases I am rather skeptical about the plastic work which we are doing upon ovaries."

Dr. C. N. Cowden, Nashville.—"Conservative surgery has been practiced more in recent years than formerly, and I am not ready to subscribe to the doctrine of taking out the entire ovary. These diseased ovaries, as a usual thing, are covered by thick peritoneum; they have been long congested from misplacement or from interference with the circulation covering the ovary, which should be as thin as the leaf of a book. The ovary is cirrhotic, shriveled up, and there is a cartilagenous-like covering over it. If you begin at the edge of the ovary and make an incision all the way along and take off the entire covering, split the broad ligament, and cut it away, I have no doubt you will get satisfactory results. I have had three women on whom I have operated in that way who became mothers. I left the secreting portion of the ovary, and tucked it away underneath the broad ligament, meeting with the peritoneal surface, and have had, as I have said, three patients become mothers after the operation. If angry symptoms come on I remove one ovary. In one case that I recall, I removed one ovary, resected both tubes, and only left a very small portion of the other ovary, tucked it underneath the peritoneal covering, and that woman gave birth to a healthy boy who is living today. Conservative surgery certainly proved grateful to that woman. I can see no reason why that ovary, which has been partially left, should not undergo cystic degeneration just as well after resection as before, and I think we should criticize ourselves for leaving an ovary in some cases. We do not know at what time that ovary is going to undergo cystic degeneration, and I think it would be a good point to determine whether you should remove all the ovary or practice conservative surgery upon it."

Dr. Richard Barr, Nashville.—Dr. Gaines did me an injustice in classifying me with the first of the two classes mentioned by Dr. Crisler. (Laughter.) I believe Dr. Crisler would remove every ovary on the slightest excuse. Dr. Gaines, perhaps, would remove half an ovary. If I remove a whole ovary or leave a whole ovary, I would likely leave more whole ovaries than he does in the same number of operations. He resects them; I leave them alone. If I can leave a whole ovary or half of an ovary, I am as conservative or more so than he. This idea that an ovary can be benefited by cutting it half in two is a new one to me. I cannot see the rationale of it. Neither can I see the advantage of peeling off the ovary. The ovary has no normal peritoneal covering, and if you peel off that, and put the ovary outside of the peritoneum, I do not see how a woman can become pregnant because the peritoneum is short of protection. I would not expect a Graafian follicle to rupture through the peritoneum. The peritoneum is a protective structure, and I think an ovary outside of the peritoneum would be incapable of leading to pregnancy, as it is almost outside of the body. You might get internal secretion from the ovary, but there is some doubt in the minds of surgeons or practitioners of medicine as to whether the ovary has any internal secretion, or whether this internal secretion is of any special value, and I believe that an effort of that sort in conservatism is more than apt to be disastrous. I think an ovary that requires any kind of surgery should be removed. I have had the same experience that our chairman, Dr. Martin, has had, namely, I have had four cases of resected ovaries in the very few operations I have done to become cystic, and the percentage has been so very high that I have resected very few ovaries. I think out of the last five resections I had four become cystic and very promptly, and that cured me of resection permanently. I never expect to do another ovarian resection. I am perfectly willing to leave ovaries if I can consistently do so and the patient is young. I advise against surgery as long as I possibly can, using every argument against it, and I believe I refuse as large a per cent of operations of this kind as any one. Do not get the impression that because I believe in removing an ovary when I operate, that I advocate removing every ovary that causes discomfort. As I have said, I put off surgery as long as I can. I do not think suspension of the uterus relieves symptoms, nor do I believe suspension of the ovary will relieve symptoms, and I do not believe that putting aside of the peritoneum a strip of the tunica albuginea will give relief. If the ovary needs anything in the way of treatment, it needs removal. Please do not understand me as advocating a Battey operation or anything of that kind in what I have said."

Dr. John A. Gaines, Nashville.—"I simply want to apologize to Dr. Barr for taking so much of his ground. Dr. Crisler mentioned two classes, and he did not come under the head of those who resected diseased ovaries or at least partially diseased ovaries."

Dr. Crisler (closing the discussion).—"I have found out what I feared I would, and that is, surgeons differ about this matter. They do not come to any conclusions. Here is one gentleman of experience, a conscientious man, who tries resection, and then we have another gentleman, equally experienced and well trained, who is not willing to do it at all. One of them is right or the other is wrong, or both are wrong. (Laughter.) Dr. Barr is probably right in a good many instances, yet technically Dr. Gaines should be correct. I doubt seriously, Mr. Chairman, if we can puncture through the cortical area of an ovary, in readjusting it to a perfect position, after resecting and taking a piece out of it, without doing damage that we cannot estimate. If we had some way of making that line of union exterior and included in the suture line absolutely sterile ova, we have some excuse for resection of the ovary. The ovary being a vascular organ, it bleeds freely, and we do not want a large blood clot in the belly; we want to close the ovary accurately and snugly to stop any hemorrhage, and in order to do that we are compelled to construct this primordial ovum and follicles that exist only in the outer or cortical structure of the ovary. I have tried it both ways. I have tried it seriously. I have tried it conscientiously, and I come to you today and tell you I do not know which method is right, or whether either one is right. This paper is not intended to instruct, but merely to open up an avenue of thought. There are a lot of good men here who are becoming capable pathologists, capable surgeons, who will help us in so far as they can in unraveling this problem. Of course, it will take a long time to do it. I did not go into a discussion of the resection of the uterus supracervically. I assume that Dr. Gaines is right about that in most cases. Supracervical amputation of the uterus to get rid of a heavy, useless, weighty organ that hangs up there after the ovaries and tubes have been removed has been recommended in practice by a great many surgeons. I have tried all of these operations Dr. Gaines has mentioned. I have also tried the operation he mentioned last in one case, and the operation was done so recently that I do not know what the result will be. The operation is unique. Our great trouble in these ovaries comes largely from disturbed circulation, commonly called congestion, and I think the so-called classical methods of attending to these prolapsed ovaries, congested and heavy ovaries, the methods that have been outlined by the masters, are wrong. The idea of taking an ovarian ligament that has become elongated by constant pressure or weight pulling, through which all the vessels pass to the ovary, folding it and plicating it on itself as though they had nothing in it but simply ligamentous structure, is absolutely absurd. I know a good surgeon who does not hesitate to hold the infundibulo-pelvic ligament to that area through which the ovarian artery passes and all ovarian and uterine veins pass out, for the purpose of draining the panpiniform plexus. By so doing you increase the tension in the veins, by folding these things on themselves and not obliterating them; yet in our text-books and by teachers we are told that is a good way to hold up the congested ovary. It is physiologically, pathologically, surgically and anatomically wrong. We do not give these cases enough study. We do not think about them carefully enough. We talk too much about what somebody else has said and neglect to study these cases carefully ourselves."

THE EYE, AND ITS RELATION TO MEDICAL INSPECTION OF SCHOOLS*

By F. P. HOOVER, M.D.,
Jacksonville, Fla.

It is not my intention to go into detail or treat on the numerous diseases and affections of the eye in this paper, but to speak on the eye as a whole and of a few conditions of the eye that require consideration, care and management by the patient, parent of the patient, and by the attending physician.

Of all the organs in the entire make up of our anatomy none are so little thought of or considered less than the eye. When one contemplates how promient a part it plays in our daily life, how exposed it is to the vicissitudes of the weather, be it hot or cold, wind or rain, we go ahead attending to our business and do not realize we have an eye until something occurs to it, such as a foreign body getting in same, injury, inflammation or disease. Truly the eye is the mirror of our soul —without it life loses more than half its interest and death is preferable to blindness.

The size of an ordinary eye-ball varies in different individuals; it usually is spherical,

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its mean diameter being about seven-eighths (7/8) of an inch; the cornea being the segment of a smaller sphere, is more convex than any other portion.

Almost all diseases of the eye are diagnosed by the sense of sight. The two most common ailments of the eye are inflammation and eye strain; seldom we see the latter without more or less of the former. In my opinion many eye diseases date back from infancy; the care of the eyes should be the first consideration by the attending physician in obstetrical practice, not taking it for granted that the nurse, if there be one present, whether professional or otherwise, will properly cleanse eyes and see that they are normally open and clear; but he should examine them *himself* before taking his departure. So many medical men are too prone to lapse into rather a dependable way towards a professional nurse when with them on a case, taking for granted they will do all that is necessary, and do it well, and leaving nothing requiring further attention on their part. One of the worst cases of ophthalmia neonatorum I ever had, either in hospital or private practice, was in New York several years ago; the baby was three weeks old; since birth, according to the mother, "the eyes had matted and stuck together;" the doctor told her "to wash out the eyes with warm water, they would soon get well," and that was all; he had ceased attending the case with no further instructions; he did nothing for the child himself, only instructing the nurse what he wanted done.

Take the children with sore eyes in the various public schools in any city and get a history from them of how long they have had same, and the answer in nine out of ten cases will be "ever since I can remember."

There should be a law in all cities having public schools that at regular intervals a specialist should visit each school and all pupils be brought before him and their eyes inspected —compulsory examination, so to speak. How many times during a school session it has been necessary for some of the scholars to be sent home and kept there, who have trachoma or sore eyes. In New York careful attention is paid to trachoma, as frequently whole schools are found inoculated, and on more than one occasion I have had entire families under treatment for this disease. Inflammatory conditions of the eye at all stages of our existence, are more or less productive of some permanent trouble, and eye strain should not be overlooked. I feel sometimes that too much schooling is a bad thing, especially so in the overcrowded schoolhouses where the ventilation and light are far from what they should be. Take the child when at school, either studying or figuring on slate or pad, have they the proper light to see as they should? does the eye not suffer from the constant steady application? to go home and there continue working the eyes? Should the result of all this cause any wonderment to the conscientious thinker? The parents ask why it is their children have headaches, become thin and emaciated, nervous and have to wear glasses. I wish this matter were given greater attention by the medical men at large; there would be less work for the specialist and fewer glasses sold by the opticians; but the bodily health and comfort, with longer life for the child and the grownup, would be untold.

Some parents have a horror of their child wearing glasses, notwithstanding the fact the test cards cannot be seen correctly, and that it is necessary to draw up the eyes and squint to read even what they can see. Recently when I told a mother her little girl 8 years old had to wear glasses she said, "I will never consent to it;" I remarked, "Madam, your child has what is called myopic astigmatism; with care she may, with use of glasses, entirely outgrow the trouble; for the sake of justice to your child let her have them." She finally consented.

In closing, would state I am in favor of a

medical inspection of schools (public). Many cities have adopted this plan to prevent and stamp out the spread of contagious and infectious diseases. It is stated a normal child is hard to find in a large public school by medical examiners; why is this? I hope before long to see the cities of Florida adopting some laws along the line of betterment of general physical condition of children in the public schools. The medical examinations are of untold benefit and I believe them to be of the greatest good for the rising generation and their offspring.

TREATMENT OF WOUNDS, SURGICAL DRESSINGS AND APPLICATIONS*

By DR. L. SEXTON,
New Orleans, La.

Under the title of surgical dressings, applications and treatment of wounds, we shall consider four types of common injuries incident to railroad or other surgery. To the young surgeon particularly, just what dressing or application is best suited to a given case very often comes up for decision; to help out in just such a contingency is the apology for this paper. Take, for instance, lacerated and contused injury of the hand that is covered with machinery grease, oil and impurities incident to a laborer's employment, shall we at the first dressing attempt to thoroughly cleanse and wash the part, or is the comfort and cure of the patient assured by any simpler method of treatment? In speaking of removing the paint, dirt and grease incident to machinery accidents spirits of turpentine or gasoline makes one of the best cleansing and antiseptic agents for removing such grease and oils that are so ground in as to be almost impervious to soap and water. There has recently come into vogue the application of diluted tincture of iodine to just such injuries as above alluded to, with results just as good in many instances as the old plan of scrubbing with green soap, manipulating the parts and trying to get rid of materials that are practically ingrained into the tissue. In fact, the extensive scrubbing of very painful and lacerated wounds and injuries is giving way to less heroic washing and brushing at the first aid treatment. All such lacerated and contused wounds should first be freed from splinters or foreign bodies, which are often driven into the flesh when the injuries are received. A favorite method of removing these particles of dirt, and at the same time helping to arrest the hemorrhage is by flushing the wound thoroughly with peroxide of hydrogen, which in oxidizing the blood boils out much of the dirt and infection, particularly if the tissue is freely flushed after the peroxide application by pouring on sterile salt solution until the parts are thoroughly cleansed. A few silk worm gut sutures to approximate the edges of the wound is necessary, mopping the surface with tincture of iodine, diluted one half, seems to prevent any infection from taking place in a great many injuries of this kind. After the application of diluted iodine, the wound should be well covered with sterilized gauze, if the injury is very extensive a padded splint should be applied, to support the arm and fingers. Another way of treating similar accidents, has been to cleanse the wound thoroughly of all foreign material, then apply an abundant dressing of sterilized gauze and absorbent cotton, using the ordinary wooden or metallic splint, if necessary, but keeping the wound thoroughly soaked in one-half of one per cent

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solution of carbolic acid or 1-5000 of bichloride of mercury solution for twenty-four hours. These applications will so soften up many of these calloused hands that they can be more thoroughly and easily cleansed at the second dressing. A patient can keep the hands so moistened by constant application of either of these solutions, or if confined to bed, may leave his hand under an antiseptic drip. The second dressing of such a case, after the hardened skin and debris has been softened and gotten rid of may be of the diluted tincture of iodine as suggested above; such a dressing enables the surgeon to determine in a few days what portion of the tissue is viable and what fragments need to be removed.

The second type of cases would be the inflammatory one of staphylococcic and streptococcic infections, where suppuration or violent inflammation has taken place in the tissue before the surgeon has been consulted. The least handling or manipulating of such an injury the better for the patient. Applications of peroxide of hydrogen, while it may boil out the pus, may at the same time extend the inflammation by carrying the diseased germs on into other tissue not already involved. The hand and arm thus infected should be placed entirely at rest and covered with an abundance of gauze and cotton batting, which should be kept under a constant antiseptic drip for forty-eight to seventy-two hours. We will usually find the violent infection which almost threatens the integrity of the arm, becoming modified and circumscribed in its development, pain will have been much relieved and the useful member of ten saved by this simple process and constant moist antiseptic treatment. Another very satisfactory and at the same time soothing dressing of the above variety of infections is the ordinary sugar of lead and tincture of opium lotion, sterilized and used by our forefathers. This application is astringent, cooling, relieves pain and is very grateful to the patient. It is needless to repeat that elevation and rest relieves throbbing pain and fever and that it should be a part of all such treatment to inflamed extremities. As stated before, a large moist antiseptic dressing, the larger the better, at least five yards of gauze roll, and a pound of absorbent cotton for an acutely infected arm or leg, combined with absolute rest in bed, if it is the lower extremity, gives better results than any other form of application or treatment. Whether these infections come from puncture by nail, splinter or machinery, it is immaterial. The point of entrance should be enlarged by a crucial incision under cocaine, to remove any part of the foreign body remaining in the tissue. Diluted tincture of iodine should be freely applied in order to prevent any more absorption from the infected point. In such cases, you will find the lymphatics of the extremities, and in some cases the veins acutely inflamed. Any examination, or manipulation, of the parts tends to spread the infection; any use of the hand or leg causes the germs to invade uninflamed tissue; if left to themselves, or with the ordinary small dressing, and the patient is permitted to walk about, or to use his hands, may result in such inflammation of the extremities that the sheaths, tendons and muscles may slough away on account of the violence of the disease. Large palmar abscesses or actual gangrene and death of the hand have been known to take place in some of the more violent processes; 103 degrees fever with delirum is not an unusual constitutional symptom in such cases. After free purgation and actual confinement in bed, keeping the limb moist with any suitable antiseptic lotion with perfect rest for two or three days will often abate the fever and stop the process by the formation of a local abscess, or in other instances end it in complete resolution. More depends upon the size and moisture of the dressing and rest of the part than in the kind of lotion that is used; there is practically little preference between the weak-

er solutions of carbolic acid, alcohol and boracic acid or combining the three together. Ichthyol is a favorite ingredient in the prescriptions of nearly all dermatologists in dry inflammatory skin diseases; outside of the odor, which is objectionable, it seems to act almost specifically in some of the streptococcic or erysipelatous inflammations. Oxide of zinc, scarlet red ointment, carbolated vaseline, balsam of peru and castor oil sterilized; in fact, any oily dressing modifies the heat and burning pain of such an inflammation and is, therefore, very soothing to the patient. Wherever ulcerated borders are to be drawn together and exuberant granulations are to be pressed down, there is nothing acts quite so well as the non-irritating Z. O. plaster applied in inch strips over the ulcerated surface. Take two given ulcers of about the same intensity, the one treated with the Z. O. plaster applied every third day (after having been thoroughly cleansed by any of the mild antiseptic lotions), and you will find that the ulcer so treated will heal more rapidly than when treated by the usual methods of antiseptic dressings and powders without the use of the plaster. We had this forcibly brought to our attention at the Charity Hospital in New Orleans in cases at the outdoor clinic, where ulcers were dressed every other day by the different methods commonly used to heal them. Of the many surgical dressings so called, we have practically excluded all except the sterilized gauze and absorbent cotton. These materials should be used freely and if the patient is exposed to infection or there is much pus to be absorbed, they should be reinforced by cotton batting, or large amputation pads, made of crinoline and absorbent cotton combined.

Many of the proprietary antiseptic powders that are put on the market at a very expensive price to the consumer have as their principal ingredient some form of iodine; the question the surgeon would naturally ask is, can we get equally good results by using the diluted tincture of iodine, which combines more easily with the secretions coming in contact with the minutest recesses of the injury, and at much less cost to the patient than by using the much lauded and advertised proprietary remedies. Much of the pain incident to removing dry dressings, which have been applied to inflamed surfaces, can be mitigated and the application removed more easily if the first dressing is made with any of the antiseptic oils or ointments which the individual surgeon has been accustomed to using. Wherever we have large raw surfaces to heal by granulation and where a great deal of suppuration has taken place, it becomes necessary to keep the pus washed away by sterile saline solution or some very mild antiseptic of bichloride 1-10,000 before any permanent dressing is applied. It is also desirable in many of these extensive injuries, as from burns, to change the dressing daily, and very often to change the plan of treatment from moist to dry. Many of these extensive granulating surfaces, after being thoroughly washed off, seem to do well under any dry antiseptic dusting powder, as subnitrate of bismuth, oxide of zinc, boracic acid, mixed in equal parts. It has been contended that these and other dusting powders are harbors for germ development, but under their application we have seen an artificial scab form under which the wound heals most naturally. In the majority of such cases unless the suppuration is very free, we make a mistake by dressing them too often. Every other day, as a rule, and occasionally left for longer periods, if the wound is not suppurating too freely, is as often as these cases should be disturbed. It is equally true that the usual antiseptic wash or solution is used too strong and that while we are trying to destroy the pus germs by these stronger antiseptics, we are at the same time destroying the new epithelial tissue by which these wounds are covered. In the dressing of a surface, which we have made raw, as in skin grafting, such pow-

ders are entirely superfluous, as after one application of the sterilized gauze, if left undisturbed for a week or ten days (if infection does not take place) we will usually find a perfectly dry and healed surface when the gauze is removed.

CONCLUSIONS.

Unless wounds are suppurating very freely, as a general proposition, they are dressed too often.

Peroxide of hydrogen injected into cavities and sinuses often carries the infection further into uninvaded tissue. Peroxide is also too strong to apply pure to newly healed tissue.

Sterilized gauze without dusting powder is sufficient protection for any clean surgical wound.

Sterile water, saline solution, or very mild antiseptic solution should always be given preference over the stronger antiseptics, which in destroying the pus cocci, at the same time destroys the new epithelial tissue by which granulating wounds are covered.

There is no better protection against infection than the free application of large sterilized pads or dressings with which they should be abundantly covered.

Absolute physiological rest by a properly applied splint or confinement in bed is a great time saver in the healing of wounds.

Silk worm sutures are much less likely to produce abscesses and should be given the preference over catgut wherever practicable.

Z. O. plaster has a wider field of usefulness as a surgical appliance than has been given to it.

In redressing wounds all materials should be thoroughly softened by warm sterile water before the dressing is removed.

"EPISCLERITIS"*

By O. DULANEY, M.D.,
Dyersburg, Tenn.

As the text-books give us so little information in regard to this disease and on account of two recent cases I have given this subject some particular study. It will be my earnest effort to correlate the truths as I have found them in the limited time of my study of these particular cases.

The specialists are prone to become self-satisfied and do not show the tendency which might result as a great etiological factor in diagnosing the diseases which we have to deal with.

Today we are on the threshold of a new opthalmology, which will be builded on a more secure foundation and with the advantages of the internist with the use of his microscope we are enabled to make a positive diagnosis of most cases which come under our observation. However, there are exceptions, but this will apply as a general rule.

Episcleritis—It is usually a circumscribed inflamed area or the subconjunctival tissue, which may either be primary or secondary. Most cases may be traced to some constitutional affection, such as rheumatism, gout, syphilis and one of the most important and one that I will try to especially emphasize—the effects of malaria. This disease is almost restricted to adults, although it may occur at any age. The difficulties of arriving at a satisfactory diagnosis as to the cause may arise in various ways: Mistakes come from overconfidence, hasty diagnosis and careless examination. In this section we should satisfy ourselves as to whether the patient has some constitutional trouble or not, and probably

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the most important in this row are syphilis, malaria and rheumatism, etc.

We cannot fully depend upon history, elicited from our patient, and especially in those cases which we find, as we believe, to be due directly to the effect of syphilis and malaria. But, however, with the use of the microscope and other tests at our hands we should no longer live in doubt.

Symptoms—On examination we find a purplish hyperaemic area of episclerial tissue. This area of swollen tissue may be one or multiple, but usually one patch or elevation, as we may term it, and that found on the temporal side of the cornea. However, there may be multiple area appearing at any point of the subconjunctival zone, but the usual tendencies are to extend around the sclero-corneo margin, with an injection of the deep pero-corneal and the ciliary-conjunctival vessels. The disease is usually limited to one eye, however, this does not always occur, as we frequently find a binocular trouble. It may occur at regular periods, both eyes affected, or intervals from one month to two years may lapse between the attacks of each eye.

This purplish or dusky area is always prominent with its pecliar discoloration, most times tender to touch, with more or less pain and discomfort. In somes cases we have considerable photophobia and lachrymation. The disease runs its course from three to eight weeks, but the period may be even shorter or longer, extend into years and relapses are frequent.

Prognosis—This disease is very slow and uncertain as to treatment. Much depends upon the original cause. In cases due to local injury the prognosis is very good, but where due to some constitutional affection relapses occur more frequently and also a complication arises. In some cases the cure seems effected, when you will notice in three or four days the recurrence either in the same locality or the involvement of new tissue and the disease more obstinate to the treatment. As a result you may find atrophied areas of sclera, especially at the junction of the sclero-corneal margin. As a complication, we oftentimes have an iritis, and also the ciliary bodies may be involved, with adhesions following as a result. Choroiditis may also occur, with an inflammation of the entire uveal tract. In nearly all cases we find the iris discolored and sluggish, but not necessarily a distinct iritis.

Treatment is indeed very unsatisfactory. We have no specific for this disease, but as before stated we must arrive at what we believe to be the direct cause of this condition. The most good is obtained from constitutional treatment. It is very hard oftentimes to form an opinion of the direct cause of this disturbance, but we are always safe in administering mercury, the salicylates and alkalines. Also the iodides play their part, especially in those cases of a specific origin. Diaphoretics are quite beneficial and well considered.

The Local Treatment—Probably the best results are obtained locally by the use of mild sedative lotions. Also keeping the pupils well dilated with atropine sulphate. With hot applications applied frequently, much depending upon the severity of the disease. The ointment of yellow oxide of mercury is very efficacious or an ointment of boric acid will often give best results.

As before stated there is no fixed treatment. Every case will have to be treated as an individual. Arrive at the diagnosis and cause, and treat them accordingly. Where we have malaria local treatment is of little use, with the exception of a mydriatic and hot applications. The successful treatment of this disease depends upon arriving at the cause. I think that I am in position to state that this is a fact from my experience and observation, as I will try to prove to you by reporting two cases which have come under my observation and care.

Patient No. 1, a young man, aged 22, white, consulted me on the 5th day of May, 1910, with the following history elicited: Family

history, good; patient, stout and robust, with exception of chills, which had occurred at regular periods for the most part of his early life and until two years prior to the present trouble; occupation, clerk in a drug store; his habits, exceptionally good. The patient stated that the onset was very sudden; claimed that there was not even any discomfort an hour or so before the attack, but suddenly in the afternoon—about 3 o'clock—his eye began to pain him and become considerably inflamed, but thinking that he had gotten something in it he failed to seek the advice of a physician until the next day. His physician, thinking it to be a simple inflammation, prescribed a solution containing boric acid, to be used every few hours. As the disease progressed rapidly and the other eye becoming affected, he was referred to me on about the fifth or sixth day of his attack by Dr. Helen, of Ridgely, Tenn. On examination I found considerable involvement and multiple areas of episclerial tissue on the left eye, surrounding almost entirely the corneo-scleral margin. On the right eye a single inflammatory area on the temporal side of the cornea was found. The lids were swollen, the palpebral conjunctival was inflamed, resembling a follicular conjunctivitis, especially on the left eye, with considerable photophobia and lachrymation. I gave him plenty of mercury, following up with a saline, with good results. Applied locally hot applications, dilated the pupil with atropine sulphate and instilled into the eye a sedative lotion containing five grains of dionin to the ounce. Also gave him internally aspirin, five grains from three to four hours, and gave him quinine sulphate for a few doses on account of the patient's having a rise of temperature, but not knowing that malaria was the cause of the trouble.

In the course of a few days the patient returned home much better and I thought would make a speedy recovery. But on the fourth day after going home his father telephoned me that his son's eyes were very much worse, could not bear the light and the pain was almost unbearable. This coming on, as in the first case, very suddenly and affecting the right eye more severely than the left. After advising him the best that I could, I told him to catch the first train and come back to Dyersburg, which was the morning of the next day. By this time the patient had to be led. On examination I found that the patient had a complicated case which involved the sclera and also a pretty severe iritis, and would be safe in saying, an inflammatory condition of the entire uveal tract. I at once sent him to the hospital, but after persistent treatment the patient seemed to grow worse, and at this time I believed to my soul I was more alarmed than my patient. After eliminating all other causes, I finally concluded that his trouble was undoubtedly due to malaria, and had Dr. Moody, of Dyersburg, to make a microscopical examination of his blood and he gave the following report: That his blood was loaded with the estivo autumnal parasites. I at once administered a bi-sulphate of quinine in most every way, with happy results. In twenty-four hours the pain was not so severe and less constant. For a long period of time this treatment was kept up, which resulted in almost a cure in about ten weeks, leaving them in only a slight congested condition of the subconjunctival tissue. But vision pretty good or almost normal.

Case No. 2—A young lady, white, age 17, consulted me on October 20, on account of pain in her right eye, stating that she had gotten something in it the day before. On examination I found the eye very much swollen, with a considerable episcleritis on the temporal side of the cornea of the right eye. The pain was so intense and constant, photophobia and lachrymation so great that light had to be entirely excluded. On arriving at the diagnosis, elicited the following history: Patient stated that she had had frequent chills up until a few weeks prior to the attack. After verifying my diagnosis as to the cause of the

trouble being malaria, I followed up the same treatment as in the previous case. The patient recovered almost entirely by the tenth day.

The principal reasons for reporting these cases were, first—to encourage others not to be misled by statements made by the patient and external signs and manifestations, and to urge all to verify their diagnosis by the use of the microscope or other tests, as we may find practical. And by the assistance of the microscopist and internist, our diagnosis will be more correctly made and the treatment more satisfactory to ourselves and the patient as well.

In the first case reported I am sure I would not have had the complications to arise nor the relapse should I have had an examination made of his blood and arriving at an earlier diagnosis.

THE AMERICAN MEDICAL ASSOCIATION: ITS ORGANIZATION, ITS POLICIES AND THE PRESENT STATUS OF ITS WORK.*

By MACK ROGERS, M.D.,
Birmingham, Ala.

ORGANIZATION.

The necessity of some uniform action on the subject of medical education caused the New York State Medical Association to issue a call for a national convention of representatives of medical societies, medical schools and hospitals, to assemble in New York City in May, 1846.

This resulted in an incoherent mass meeting that merely determined what it wanted, and that the next meeting should be a delegated body.

The second national convention in Philadelphia in 1847 was really the first meeting of the A. M. A. and was the one at which the plan of the present organization was adopted.

This plan provided for representation from all organized medical bodies, as well as from medical colleges, hospitals and asylums.

Each organized body was entitled to one delegate to every ten members.

Later this membership was restricted to medical organizations, with the three government medical services added.

With but few slight changes these conditions prevailed down to the reorganization in 1901.

During all this time but little progress was made toward accomplishing the real purposes of the organization, resolution after resolution was adopted, with the very best intentions, but nothing ever came of them, primarily, because of the lack of strong coherent organization, and, secondarily, because the committees to whom they were referred had no financial support.

The impotency and imbecility of the organization along material lines was recognized all along by its friends, but none of them, at the time, seemed able to bring forth a more efficient plan that could be agreed upon.

Finally, however, there arose among them a lawgiver, like Solon of old, in the person of Dr. N. S. Davis, who at the St. Paul meeting in 1901 so modified the original provisions as to restrict the right of representation to state associations, the scientific sections and the three government medical services. He also modified the apportionment of representation so as to provide that the total number of delegates should not exceed 150.

And further provided that this body of 150 delegates, instead of coming together in the general meeting of the association, as was the case prior to 1901, should hold its meet-

*Read before the Alabama Medical Association.

ings in a separate hall provided for the purpose, and this subsidiary body was given the distinctive name of the House of Delegates of the A. M. A., and was to be known as its legislative body, where all business matters of whatever nature must be transacted.

These three essential changes, and these alone, were made in the organic law of the association, and yet how marvelous have been the results!

Forty-nine states and territories are now organized and in close affiliation with the A. M. A.

The membership of the association on May 1, 1910, was 34,176. The membership of the various constituent state associations on the same date was 70,146, and the number of copies of the association's journal now published each week is more than 54,000.

The expert auditor's report January 1, 1910, showed the total assets of the association to be $396,535. The net surplus income of the association for the year 1909 was $41,867.

The association is chartered under the laws of the state of Illinois and has its headquarters in Chicago, where it owns its own home, a modern fireproof office building, of concrete, brick and stone, six stories high and sufficiently strong to admit of additional stories in the future, fronting 100 feet on Dearborn avenue and 120 feet on Indiana street, in the very heart of the second greatest city on our continent.

From these statements it will be observed that the processes of organization and material growth are marching steadily onward under the generalships of our modern Moses and Aaron, in the persons of Dr. Geo. H. Simmons and Dr. J. N. McCormack.

By this coherent organization and the establishment of the association's journal, financial resources have been provided by which the organization can actually accomplish its purposes, and is now able to finance any reasonable undertaking that it may see fit.

And yet, all this, colossal as it is, is a mere pittance when compared with the marvelous work that has been accomplished by the scientific sections and the various committees, especially the Council on Medical Education and the Council on Pharmacy and Chemistry.

Because it is the results of their labors that so abundantly and so righteously justify our existence and our efforts.

By stressing the material side of the organization, I would not have you infer that the scientific side has not progressed, *pari passu*, and I am sure no one familiar with the Journal could think otherwise. The scientific side has always been a marked success, but since the establishment of the Journal it has progressed by leaps and bounds, till now the proceedings of the scientific sections as they appear in the Journal are eagerly sought by all the leaders of scientific medical thought throughout the civilized world, and the association's journal stands today without a peer as a scientific medical periodical.

There are now thirteen scientific sections as follows:

(1) A Section on the Practice of Medicine.

(2) A Section on Obstetrics and Diseases of Women.

(3) A Section on Surgery.

(4) A Section on Opthalmology.

(5) A Section on Laryngology and Otology.

(6) A Section on Nervous and Mental Diseases.

(7) A Section on Preventive Medicine and Public Health.

(8) A Section on Stomatology.

(9) A Section on Diseases of Children.

(10) A Section on Dermatology.

(11) A Section on Pharmacology and Therapeutics.

(12) A Section on Pathology and Physiology.

(13) A Section on Genito-Urinary Diseases.

Each of these sections meet in a separate hall provided for the purpose and organize by electing a chairman, two vice chairmen, a secretary, a delegate and an alternate delegate to the house of delegates. They devote their entire time to their particular subjects.

All their work is strictly scientific and all their papers are turned over to the secretary of the association for publication in the Journal.

POLICIES.

One is struck by the numerous lines along which the activities of the Association are extending.

Instead of a small body of men meeting once a year for scientific and social purposes, we now find a vast organization extending into every county and almost every town in the land, deeply engaged not only in the scientific work of the profession, but also in the solution of economic and socialogic problems in a manner scarcely dreamed of by even the most enthusiastic workers but a few years ago.

Among the numerous subjects which the organization has taken up may be mentioned:

The systematic and thorough personal investigation of the medical schools of the United States, with a view to elevating the standard of medical education, and the moral and scientific attainments of those who seek to enter the profession.

The careful study of the various state laws governing the practice of medicine, with a view to drafting a uniform medical practice act, which will secure to the people the greatest degree of protection and to the profession the greatest degree of justice.

The systematic education of the people in matters relating to health, public and personal hygiene, to the prevention of blindness, to the care of dependents, to the prevention of the propagation of the insane and criminal classes.

The passage of such laws by the national and state governments as shall secure to the people pure and wholesome food and pure drugs.

The establishment of a national department of health, with duties and powers commensurate with the importance of the subject.

The adoption of a uniform system of nomenclature and classification of diseases.

The careful study of the rules and regulations governing membership in county societies, with a view to securing greater uniformity thereof, and for the purpose of improving, if possible, the plan of organization of the local, state and national bodies.

The education of the people in regard to the dangers of the patent medicine frauds, and of the profession in regard to the composition and the effects of the proprietary drugs and new remedies.

These are by no means all the problems which the association is undertaking, but they are sufficient to indicate something of the direction of its efforts.

The annual meetings of the association are held at the time and place selected by the house of delegates. The general meetings are composed of all persons of whatever class, and are devoted to purely public and social functions, such as the welcome address and response, the president's annual address and reception, etc. This general meeting, after the public functions are over, resolves itself into the house of delegates and the thirteen scientific sections.

The house of delegates is now composed of 134 members from the several states and territories of the Union, thirteen from the thirteen scientific sections and one each from the three government medical services, making a total of 150 members entitled to seats on the floor of the house of delegates of the American Medical Association.

The reapportionment of these delegates is made by the house of delegates itself each third year, and the number of delegates that each state is entitled to is proportionate to the number of members of that association; for instance, Alabama is entitled to three delegates, Dr. Sanders, Dr. Sims and the writer having enjoyed this distinction for the past two years, so that this paper may be regarded as my report to you.

Heretofore these delegates have been elected for a term of three years, but hereafter their terms will be limited to two years.

The law provides that the president of the association shall preside over the house of delegates and that the secretary of the association shall act as secretary of the house of

delegates. The house is, therefore, organized by the president calling it to order and announcing the order of business.

The most important and powerful agent of the house of delegates is the board of trustees, composed of nine members, three of whom are elected by the house of delegates at each annual meeting for a term of three years.

They are all powerful in the interval between the meetings of the house of delegates. They have entire charge of all properties and all financial affairs and all business matters of whatever nature. They supervise and direct the course and action of all officers, committees, and so on, during the interval between the annual meetings.

This, of course, includes the publication of the Journal. No officer, agent or committee can make an expenditure or contract an obligation without the written consent of the board of trustees. They organize themselves by selecting one of their number as their chairman and another as their secretary, and they make a detailed report of all their work to the next annual meeting of the house of delegates.

The house of delegates, like most parliamentary bodies, accomplishes the vast majority of its work through its committees, and it has, therefore, provided itself with three classes of committees: (a) standing committees, (b) reference committees, and (c) special committees.

The first of these, or the standing committees, have been given the distinctive name of councils, which in this association has come to imply the maximum of dignity and power.

So we have:

(1) The Council on Medical Education.

(2) The Council on Pharmacy and Chemistry.

(3) The Council on Health and Public Instruction.

(4) The Council on Judiciary.

These councils are permanent and are composed of five members each, nominated by the president and elected by the house of delegates. They are invested with unusual authority and are assigned a broad scope of action. They are the potential factors in accomplishing the real purposes of the organization. They have the moral influence and the practically unlimited financial support of the entire American Medical Association to enable them to carry forward to a successful issue the sacred commissions that have been entrusted to them.

How excellently well they have discharged these duties is indicated by the results that have already been accomplished.

Seven years ago the Council on Medical Education was assigned the duty of informing itself of the low grade methods of medical education, then prevailing, and devising ways and means by which these methods could be overcome, and a higher grade of medical education established.

The council at once established itself in the association's building in Chicago and employed a permanent secretary to conduct its clerical work. It organized itself and adopted a definite plan of procedure, and under the wise and prudent, yet progressive, chairmanship of Dr. A. N. Bevan, has accomplished results that are truly amazing.

The council at once focused all its energies upon the investigation of medical colleges and the just, yet generous, classification of them. To do this they found it highly desirable to closely affiliate themselves with both the American Medical College Association and the several state medical examining boards. So, with these alliances firmly consummated, and a cordial working understanding with the Carnegie Foundation people, the council soon found itself well under way to accomplishing its purposes.

In the meantime, the council had set about to inform itself of the number, name and location of all medical schools of whatever character, not only in the United States, but in the entire world. Three hundred and ten of these institutions were located, and of this number the United States alone had 138 of them, or nearly one-half of the total number.

The next problem to be considered was

the standards and methods of the schools in the United States, and it was developed that no standard of any kind existed, that each school was a free lance, a law unto itself, with absolutely no restrictions whatever.

The information the council obtained by correspondence and otherwise for the first three years was so unsatisfactory that it determined to make a personal inspection of all these institutions. This was done chiefly by the secretary of the council and was completed in 1908. This first personal inspection revealed the facts that no definite and reliable information could be obtained otherwise, and that the catalogues and announcements published by many of them could not be relied upon.

A second personal inspection was completed last year, and by a civil service system of marking resulted in a classification of all these colleges as follows:

Class A—Schools marked above 70, which, under existing conditions, are acceptable.

Class B—Schools marked beteween 50 and 70, which need certain improvements to make them acceptable.

Class C—Schools marked below 50, which need a complete reorganization to make them acceptable.

The council in the meantime, by comparison, found that America had a greater proportion of physicians to population than any other country in the world, and that their standard of education was proportionately low. In Nevada, for instance, there is one physician to 239 population, while in Alabama there is one physician to 924 population, the average being one to 655.

With both this average and the low grade of education constantly increasing, the natural question was, how could it be corrected? This reverted to the question of who granted a license to these applicants to practice medicine? The answer was, the 82 medical examining boards in the 49 states and territories.

It is clear, therefore, that since they are the courts of last resort, that these examining boards are the ones to set the standard. The council at once acquainted itself with the requirements of these boards, and at the same time explained to them the desirability of having a single board in each state and of having a common standard for all the boards, and of elevating this standard at least to a respectable degree. So now both the council and the boards recognize that by a close and cordial understanding they can obtain the very best results.

The way is now clear in those states where the examining boards have the power to say what schools are "reputable," but there are yet several state boards that do not have this power, and of course can acquire it only by legislative enactment. And when this is accomplished, it would seem that the days of medical schools in classes B and C had passed and that none but well prepared and well qualified men can enter the profession.

The council is committed to the policy of having only one medical school in each state and that school to be the medical department of the state university, the exceptions being those universities having ample endowments to enable them to successfully maintain the high standards of the state institutions.

The council believes that the coming American standard will be: A four years' high school education, a year or two in the university laboratories of chemistry, physics and biology, four years in the medical school and a clinical year as an interne in a hospital. The work done by the Council on Pharmacy and Chemistry, as published from week to week in the Journal, has been of the greatest practical value to every physician. These good results have been made possible, alone, by the fact that the work, which could not have been bought with money, has been done largely gratuitously by men of the highest scientific attainments and imbued with a purely altruistic spirit. This work really should have been done by the federal, state and municipal authorities, but it required the courage of those who constitute the council, and the prestige of the A. M. A., to antagonize the

powerful interests connected with patent and proprietary medicines.

The council is constantly examining a large number of preparations with which the profession is being exploited, and weeding out the frauds and fakes, so that the physician today needs not be deceived by the false representations of agents into using or administering anything with which he is not entirely familiar.

During the past year the council has made an exhaustive study of the various so-called meat extracts and meat juices, as they appear on the market. This revealed the fact that the meat extracts are practically devoid of nutritive bodies, and that while some of the meat juices have considerable nutritive value, many products under this name proved to be merely meat extracts and of no value whatever.

Another class of products of great interest and importance at this time, and concerning which reliable information has been difficult to obtain, is that of the various serums and vaccines. The council has done invaluable work in preparing and publishing reliable descriptions of these products.

It seems almost unbelievable that any person or firm would attempt to perpetrate such gross frauds on the profession and the public as have been uncovered in our own laboratories. For instance, a product called "Health Grains," which is offered as a remedy for dyspepsia, indigestion, nervousness, etc., was found to consist of nearly 90 per cent of sand and about 10 per cent of sugar.

Another product sold at an exorbitant price, with outrageously exaggerated claims, as a face preparation was found to be about 90 per cent ordinary Epsom salts and 10 per cent borax.

A certain product which was submitted to the council by the manufacturer was found not to contain the substances specified on the label. When attention was called to the fact the manufacturer attempted to explain the discrepancy between the label and the contents by saying it was due to a lack of coordination between the various departments. Remember, this was not a patent medicine, but a proprietary article, offered to and used by the physicians. The name of the concern has been withheld, because the article has been taken off the market. Numerous other instances similar to the above might be mentioned, but sufficient has been said to indicate the character of work that is being done in our laboratories.

In addition to the great amount of work done by the members of the council, in their own laboratories, the Association maintains a complete chemical laboratory of its own in the Journal's building, under the direct supervision of Prof. Puckner, where analyses of all kinds of preparations are constantly being made. The work here has grown so rapidly and has reached such proportions that another chemist has recently been employed to help carry it on.

In the main, then, the work of this council thus far has been to determine whether or not those dealing in medicine were actually telling the truth. The council has examined practically all the non-official articles now on the market, and those not listed by it are not deemed worthy of consideration by the profession.

While the Council on Health and Public Instruction devotes a large part of its time to the subject of uniform medical practice acts in the several states and territories, yet it deals directly with all medical legislation, whether local, state or national, seeking to bring about a uniform and consistent system of medical laws throughout the nation. This council has learned from experience, both in state and national legislation campaigns, that any effort to secure the adoption of desirable laws for the protection of public health, either in state Legislatures or in Congress, must, if successful, be preceded by a campaign of publicity and public education, in order that the people and their representatives in legislative assemblies may understand the necessity of such laws.

Education not only of the general public,

but of the medical profession as well, is also a necessary part of any campaign for better conditions. This council has succeeded in arousing in Congress much interest in a department of public health. This interest has been manifest by the introduction of at least three or four bills providing for departments, bureaus, etc.

Hon. Robert L. Owen, Senator from Oklahoma, introduced a bill in the Senate in February, 1910, that provides for a department of public health, with a secretary in the President's cabinet and of the transfer of all public health agencies to such department.

Mr. Simmons introduced a bill in the House in April, 1910, which provides for a department of public health conducted by a public health commissioner.

Mr. Mann's bill in the House seeks to convert the Marine Hospital service into a department of public health. And still another bill contemplates a national bureau of health.

All these measures are now under more or less serious consideration by our national Congress, but, so far as my information goes, have not yet been reported out of committee.

This national department of health measure has been urged by President Taft in his message to Congress and he informs us that he stands ready, at the proper time, to give the movement further support by a special message.

The joint conference of this council March 2, 1910, with the Council of Medical Education and the large number of other persons concerned in uniform medical practice act, was a marked success, judging both from numbers (167) and results.

Practically every phase of this subject was brought out and discussed freely and resulted in the appointment of a committee to draft a model medical practice act. This was done and submitted to the house of delegates for its consideration and discussion at the St. Louis meeting last year. No definite action was taken at the time, but it was agreed to refer it to the various state boards for their consideration, criticism and suggestion, and when it comes back it is hoped that the committee will be able to reconcile the conflicting parts and ultimately arrive at a document that can be regarded as the best possible standard as a model medical practice act.

The Association can be pardoned for a modest degree of pride in the national pure food and drug act. It has just cause to feel elated over the marked success of the American Medical Directory, and I am informed that the Archives of Internal Medicine has been another instance of its sound judgment. However, in our ambition to take up new subjects, or to prosecute more vigorously those already in hand, we should always remember that our strength lies in a righteous cause, honestly fought.

THE RELATION OF PHYSICIANS TO LIFE INSURANCE.*

By EX-GOVERNOR W. D. JELKS,
President of the Protective Life Insurance Co.,
Birmingham, Ala.

Insurance is not new; it existed probably before the pyramids were built. The first policies were written as sick benefits and for the care of infirm members of certain societies. It was required of these early policy-holders that they should be pious and holy. I believe an insistence on these requirements now would seriously interfere with the magnitude of the business done, though it might very probably add to the general "expectancy." Moreover, the life insurance companies of today have no license to insure against the fires of the here-

*Read before the Medical Association of the State of Alabama, Montgomery, April 18, 1911.

after. Besides the benefits above named, there were the "wagers" by rich speculators on many different lines; a warrior would be insured against his death in a coming conflict; a lover would protect himself by a wager against the fickleness of some fair damsel; a mariner would insure against the perils by sea or captivity. Insurance in this particular time was a mere wager; it had no equitable basis.

Then there came some dark days for insurance. There were thieves in the business in the dark ages, as in later times. There were forerunners centuries ago of such men as the investigations of a few years ago disclosed in the conduct of the great life companies in this country.

Life insurance premiums now must be made with mortality tables in front of the actuary; the rates and the tables keep step together. It is only of recent years that these tables have been procurable. In the earlier times, there was no experience table of mortality, and if there had been such a table, the premium rate that is now known would have been impossible; indeed, genuine life insurance would not have been possible. Society was so disorganized; wars constantly, and private feuds stepping in to add to the tremendous death rate. Moreover, the spirit of adventure sent men on perilous journeys by sea and land. Those that were not killed in a continuous physical struggle or in crusades for alleged holy purposes, or in other adventurous journeys, were left at home to die in ill-ventilated homes—houses unlighted and unventilated—furnishing opportunity for disease not known now to even those among us who live in the crudest manner. All sanitary laws were disregarded, or rather, were unknown. Drinking was not a crime; now you cannot get by a medical board if you take too much, or if you take it too often. In this connection I might say that one of the most difficult things in passing on a candidate for life insurance is to interpret the commercial reports on a man who drinks at all. The report or reports reveal the attitude of the individual reporter to the use or abstention of alcohol. Under the head in the report: "Does he drink to excess?" reporters will seriously disagree, which brings up the question much discussed: "When is a gentleman drunk?" In a recent discussion of this matter in the press of New York, which discussion engaged the attention of a large number of conspicuous persons, I believe it was about decided by a certain liberal element that a man was not drunk so long as he could stand up at the table among his fellow men and articulate at all. The medical departments of life insurance companies, I believe I may say, are taking a much more serious view of the drinker, and even of the casual drinker.

The latter part of the seventeenth century the absence of sanitation brought on in London several tremendous plagues, and the "Great Plague." Life was most uncertain and what is known as scientific life insurance was impossible.

We have tables now, however, on which to base all premium rates—an actuary to figure the exact cost of insurance. A premium is no longer a matter of doubt and uncertainty; it is an exact measure of "expectancy." This is proved in part by the fact, which I believe is a fact, that in thirty years no man in the United States has lost one dollar on an investment in a legal reserve life insurance policy.

What a wonderful thing is life insurance! What a tremendous business! In 1909, 176 legal reserve life companies in the United States had assets of $3,643,857,971, a tremendous aggregate of capital—an aggregate of capital equal to eight times the assessed valuation of all the property in Alabama.

These companies had a surplus of $337,695,958—that much money above all possible then present obligations, a surplus, as will be seen, in amount equal to the total assessment of the property, real and personal, of Alabama ten years ago. These same companies in the same named year had an income of $784,827,892. This vast aggregate income was a tax on every community in America. No hamlet is

so obscure and insignificant as not to contribute some trickling stream to that vast river of gold which flows into the great centers of life insurance. Out of this immense income were paid death claims of less than one-half of the income. A large part of the enormous sum went for expenses and profits; the whole, watering and fructifying in a wonderful way all those particular localities that received material portions of it.

Alabama contributed in 1910 to insurance companies $5,234,192, and in death claims and in endowments paid, Alabama received back $1,872,992. It is calculated that since the war Alabama has paid out to legal reserve life insurance policies a net amount over the returns received, a sum of money which, compounded, would amount now in volume to a sum equal to one-half of the assessments on the books of the state.

Life insurance is a very vital question with us as a people, not less than as individuals. How to protect our individual families and how to build up the great state of Alabama with the state's money ought to interest every citizen of the state.

The premium rates have been made in the face of mortality tables. It remains for the company to obtain not less than a fair average of physical risks; hence the importance of the medical examiner. Their selection is a matter of most serious consideration, as a company cannot afford to carry too many life discards. An examiner with a moderate degree of skill and efficiency in his line, and honestly serving the company, can give it a class higher than the average life. Such an examiner would recognize that the company was his patient and entitled to the same fair dealing that he gives to the afflicted. He would appreciate the fact that his duty was to the company which appointed him and which was to pay him, and in no sense was he under obligation either to the agent who sold the insurance or to the candidate for insurance. The company, of which I am an officer, has no great number of complaints to make of the treatment which has been accorded it by the various members of the profession in Alabama. I personally feel that these complaints will be in smaller number in the future. However, our experience has not been altogether satisfactory. We have discovered that from some doctors there is reported a too great uniformity of pulse-beats. Out of a half-dozen cases from one physician, the pulse of each applicant for insurance stands up in exact accord; his pulse beats exactly in time with the pulses of the several persons making application in the same community and in the same few days. These pulses not only seem to stand up together, but they sit down together, and as a layman, I think I have a right to say the pulses ought not to do that way. Then, occasionally we find a doctor suffering from the use of a urinometer on crutches. These two items represent some of the more common complaints. Carelessness in these particulars is very observant to the trained eye of the medical department. Personally, I would prefer, if we are to proceed on adequate data, that the inadequacy be made not so transparent. We sometimes refuse to receive these examinations. The medical department understands, of course, that the doctor is merely guessing at the specific gravity and the pulse, if not sinning against us in a more serious way. It does frequently happen, in cases like the one reported, that the company not only dismisses the doctor from its employ, but I have understood that some companies uniformly file a complaint against such doctor with some central authority. If such a thing should happen, the careless examiner finds himself without a client in all the insurance world. I think I am conservative in saying that a good number of practicing physicians have thus, by their carelessness—shall we say—destroyed in a day their field of usefulness with all life companies. The companies feel that inasmuch as they were appointed to guard the door against wrecks and weaklings, they failing, it was very necessary to them to appoint some other guardian. But, as I have said, the company of which I am an officer has little cause for

complaint against the members of the Medical Society of Alabama.

I think it likely that this society, in its membership, stands out superior to like memberships in many other state medical societies. A great and honored man, forty years ago perhaps, led the Medical Society of Alabama out of a wilderness, formulated a great constitution, set on foot a wonderful body whose laws have been copied by many states. The spirit, I take it, of that great man rests upon the society today and inspires its membership.

It will probably interest you to know something about the vicissitudes of a young life insurance company, in so far as its mortality is concerned. The company, of which I have the honor to be an officer, has been in business something over three years. Our losses have not been excessive; on the contrary, they have been moderate. It will, perhaps, surprise you to know that only 25 per cent of our losses followed a sickness, in which the patient was able to get to his bed—and linger—and send for a physician. Seventy-five per cent of our losses came from deaths which hurried the policyholders away—to our regret; of this 75 per cent, 10 per cent fell by accident, 7 per cent came from the use of tools which provide an easy way for freeing one from life's too strenuous battle. Poor devils, they could no longer endure the strain! It is fair to them to assume that in their last moments they never thought of us. The doctor's knife was responsible for 10 per cent of our losses, wielded too late, perhaps, and 48 per cent of these losses came from sudden attacks, such as paralysis. We have been complaining ever since the last notice came to us that it was unfair treatment—that a young company should have had some notice; that these losses should have been incurred in an orthodox way. This leads me to inquire of you, dear, learned gentlemen, if there may not be a remedy against such an unnecessary habit. Can you not find out a way to measure more carefully the physical spirit, to the end that we may more accurately calculate its capacity for carrying its owner over intervening years? I have it in my heart to beg you, dear gentlemen, for a service in this direction.

Life insurance, while its volume is so tremendous, is, at least so far as we are concerned in Alabama, in its infancy, and every year it will grow and you gentlemen will help it to grow in your daily practice. You see the great benefits which accrue from it, to widows who are made comfortable, and to children who are cared for by it. Probably not one man in ten in this state, who really can carry some small amount of life insurance, has any at all. The great body of farmers in the state, suspicious because of what they have read of insurance thieves and what they have known of assessment failures, are unrepresented on the books of any legal reserve life insurance company. It is true they have not always been in a condition to make any provision for the future of their families, but they are in such vastly better circumstances now that I apprehend that there will be a tremendous growth—a hurrying on the part of the farmer to provide against a day of trouble for those who are as dear to him as can be loved ones of the city and the small towns. Probably in your insistence that your patient make some preparation against a day when the strong arm shall be removed, you will remember that there are several life insurance companies in Alabama—organized in Alabama—under the superintendence of the state of Alabama, writing insurance along reputable lines, at reasonable rates and under a comprehensive law which exacts from these companies the legal reserve portion of every premium in interest-bearing collateral, and in exchange for such deposit affixes the great seal of the state to such policies. While you preach life insurance, as it becomes you to do, you might remember that if we would build up our own industries in the state, we should undertake to keep here some part of that wonderful golden stream which has fed other sections, and watered other sections and supplied other sections. If it were possible to draw a line around Alabama, and not go out of it for a single thing, we could live and prosper,

I believe, more abundantly than we have ever prospered before. Certainly an income in this state for the several life insurance companies in the state of $5,000,000 a year, the amount we contribute, would be a tremendous assistance to every Alabama enterprise, not excluding any one of them.

Life companies now equal in this protective care one thousand great asylums for helpless women and five thousand great asylums for unfortunate orphans!

POLIOMYELITIS.

In its issue of March 4, 1911, the Journal of the A. M. A. speaks at length of the important contributions to our knowledge of poliomyelitis made by recent investigators. Referring especially to the three papers lately published by Osgood and Lucas, Flexner and Clerk, of the Rockefeller Institute for Medical Research, and Anderson and Frost, respectively, the A. M. A. Journal sums up the results of their investigations as described in their articles as follows:

"The importance of the results reported in these three papers can hardly be estimated, but their possible bearing on the epidemiology and control of the disease is obvious. The papers, however, bring out the following points very clearly:

"1. The clinical diagnosis of abortive cases of poliomyelitis is a possibility and the fact that such cases have been definitely demonstrated may explain the apparent immunity of children in households where there are cases with frank paralysis.

"2. It has been demonstrated that monkeys, after the acute stage of the disease has passed, are carriers of the infection in the nasopharyngeal mucosa; and the same thing is possible with human beings. If this is proved to be the case, efforts for the control of the disease must take into consideration such carriers. Cases of these two types add serious difficulties to the efforts for the control of poliomyelitis.

"3. The results obtained in the use of hexamethylenamin in inhibiting, in a certain proportion of cases, the onset of paralysis suggests the possibility of the use of this drug in serious outbreaks of the disease as a prophylactic."

The third conclusion would lead the thoughtful physician who had under his professional care a family of children, one of whom developed poliomyelitis, to persistently administer hexamethylenamin to all of them in the hope of rendering their secretions hostile to the growth of the etiological factor of the disease.

A TYPHOID CARRIER.

Charles E. North, New York, presents an interesting description of the search for the source of infection in an Adirondack camp, isolated from other settlements and maintained under the most sanitary and hygienic conditions. The first outbreak occurred among the caddies, guides and servants, occupying an isolated house, separate from the main camp in its water, milk and other food supplies, and in its drainage. The second was in the camp itself, after everything had been done to destroy the supposed cause of the original infection. Two months after the first outbreak occurred the second. After examination of all possible contagion the cause was traced to a guide who handled a small amount of the milk used in the guide house. It was found that this man was a typhoid carrier, in whose stools there were millions of germs. The infection was carried from a barnyard where he deposited his excreta in a manure heap, by flies, to the kitchens of the guide house and of the main camp.—*Medical Record*, March 25, 1911.

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Next Meeting Hattiesburg, Miss., November 11-13, 1911.

The Los Angeles Meeting of the A. M. A.

The Los Angeles meeting of the American Medical Association was the most delightful session in the memory of those who were fortunate enough to visit the "Home of the Queen of Angels." The House of Delegates in adopting resolutions of thanks to the medical profession and the general public of Los Angeles for the prodigal hospitality extended to the visiting physicians, voiced the sentiment of every one in saying that "Los Angeles will never again be called upon to defend her title of the Queen Hostess among American cities."

AN IDEAL MEETING.

Dr. Nicholas Senn wisely said that "medical societies are the great post-graduate schools for physicians," but their meetings are also a part of the doctors' holiday. Therefore, the ideal meeting of a medical society combines opportunities for instruction with comfort and pleasure, and since the scientific work in the various sections was excellent and Los Angeles, with its environs, is one of the show places of America, the sixty-second annual session of the American Medical Association was a success in every way. The social features, however, were more in evidence than usual for the reason that most of the physicians who attended the meeting were accompanied by their wives and seemed "upon pleasure bent," with only an inclination to learn of the latest advances in medicine and surgery.

ENTERTAINMENTS.

The writer regrets that the limits of an editorial will not permit a description of the elaborate entertainments provided by the physicians and citizens of Los Angeles, which included the usual receptions and smokers, with many unique and attractive forms of amusement which are peculiar to Los An-

geles. The Spanish barbecue in the gorgeous and beautiful sunken gardens of Adolph Busch, who also seemed to have transported his brewery from St. Louis to Los Angeles for the occasion; automobile rides over the most beautiful driveways in America; games of polo, the harness and chariot races in the beautiful and flower bedecked Pasadena; the trip to Catalina Island, where the submarine gardens, with their varicolored piscatorial inhabitants, were viewed through glass bottomed boats; the trolley trips to Venice and Long Beach; yachting trips over the placid waters of the Pacific—were among the entertainments for the Eastern visitors.

Los Angeles is one of the most wonderful, as well as one of the most attractive, cities in the world, and not the least of its attractions is the climate, which is balmy enough to grow oranges, grapefruit and strawberries the year round, and cool enough in summer to sleep under blankets every night. The writer was so charmed with his visit to Los Angeles that he cannot refrain from advising all his friends to visit southern California at the first favorable opportunity.

THE PRESIDENT'S ADDRESS.

It was expected that Dr. Murphy, in his presidential address, would suggest a number of innovations for the advancement of the association, because he is known for his great ability and original ideas. His friends were therefore not disappointed in the address, which was a masterpiece of English and abounded in wisdom and eloquence.

Dr. Murphy suggested that at each future meeting of the association there should be presented to the public a series of popular lectures and demonstrations regarding medical subjects in which the laity is interested. This would surely result in great good by educating that public in the various cities in which the meetings of the association are held. Another excellent and practical suggestion was that one or two days before and after the meetings clinics should be held upon the diseases, both medical and surgical, in which the general practitioner is interested. This plan, properly carried out, would no doubt result in increased attendance by those who are interested in the various departments of medical and surgical work.

PLAN FOR INCREASING MEMBERSHIP.

We are entirely in sympathy with the suggestion that every member of each county and state medical society should also be a member of the A. M. A., because it would greatly increase the prestige of the organization to have enrolled all the 70,000 members of the county medical societies, instead of 35,000 at present. Such a membership would greatly facilitate securing desired medical legislation and would increase the influence and usefulness of the organization in its efforts for the betterment of everything pertaining to the medical profession and also in not the least important of its functions, i. e., the protection of the public from diseases of all kinds.

We differ with Dr. Murphy, however, in the methods of obtaining this desired increase in membership. He suggested that a portion of the fees or dues to county medical societies be given to the American Medical Association. This would mean an increase in dues to the county medical societies. It is true that the amount would be insignificant to most of us, but in the rural districts any increase in dues would cause discord and result in a decrease in members. Dr. Murphy also suggested that a reduction in price of the Journal would increase its circulation and the increased income from advertisers would more than make up the difference. We believe that it would be a mistake to reduce the price of the Journal. In the first place, it is the greatest medical journal in the world and is worth more than any other five-dollar medical journal published. Physicians, therefore, are willing to pay the price. Lowering the price would cheapen the Journal and would make it less appreciated without increasing its

circulation. The Journal should not lower its subscription price to secure subscribers, but continue in the future, as it has in the past, to depend upon its excellence to increase its circulation and influence.

The suggestion was made in the House of Delegates to give membership in the American Medical Association without cost to each physician who is a member of his county medical society. Those who pay five dollars (the present members) would be called "fellows" or active members and receive the Journal with the privileges now accorded members. We believe that many of the 35,000 new members thus created would very soon desire to become fellows or active members and that they would be willing to pay five dollars for the honor, particularly when by so doing they would get the full value of their money by receiving each week the best medical journal published.

A HEALTH JOURNAL FOR THE LAITY.

Dr. Murphy's suggestion that the American Medical Association should establish a popular health magazine, which could be read and understood by all classes of people, seemed to meet with the approval of every one. We believe that the time is ripe for the establishment of such a journal and that it would be a success financially from the beginning. The public is interested in preventive medicine and in all matters pertaining to public health more than at any time in the history of the world; and all classes are thirsting for information on those lines that may be considered authentic. Who better than the leaders in organized medicine are prepared to give the public the information it is demanding?

If the public understood just what the A. M. A. stands for, and as to the great needs of a national department of public health, information which could be disseminated by a health journal for the laity, while it is also teaching personal hygiene and right living, there would be little difficulty in securing needed legislation by Congress. By all means let us take the public entirely into our confidence and such faddists as antivivisectionists and antivactionationists would cease to exist. Think, too, of the good that would be done if the A. M. A. propaganda regarding patent and proprietary medicines could be read by the general public.

The American Medical Association owns one of the most complete publishing plants in America and is prepared to publish such a journal without risk of financial loss. The Journal already has in its office force men who are eminently qualified to edit such a journal; and it would be easy to secure associate editors from all classes, as teachers, sanitarians, engineers, etc., as well as eminent physicians from all parts of the country; so that the establishment of a monthly health magazine seems to the writer one of the new duties demanded of our great national medical organization.

THE HOUSE OF DELEGATES.

The House of Delegates attended to the usual routine of work, and reports from all the committees showed progress in a way that augurs well for the future success of the association in all its undertakings. The Council on Medical Education is continuing its good work; and likewise the Council on Pharmacy and Chemistry and the Council on Health and Public Instruction are making commendable progress. The reports of these councils, which will shortly be published in the Journal of the A. M. A., should be studied to appreciate the really great work that is being accomplished by the A. M. A.

The House of Delegates created a new Section on Hospitals and combined the two sections on Dermatology and Genito-Urinary Diseases into one.

Atlantic City was selected as the meeting place, and Louisville announced its invitation for the 1913 session. If all the members could hear the poem, expressing Kentucky's invitation, as read by Dr. A. T. McCormack,

in the House of Delegates there would be no doubt of Louisville's being the selection for 1913.

OFFICERS ELECTED.

The following is a list of the officers elected by the House of Delegates:

President-elect—Dr. Abraham Jacobi, New York.

First Vice President—Dr. W. Jarvis Barlow, Los Angeles, Cal.

Second Vice President—Dr. F. W. McRae, Atlanta, Ga.

Third Vice President—Dr. W. R. Tipton, Las Vegas, N. M.

Fourth Vice President—Dr. A. L. Wright, Carroll, Ia.

Dr. George S. Simmons announced his resignation as secretary to the association for the reason that the duties of editor of the Journal have increased to such an extent that all his time is required for that work. He has desired to give up the position of secretary for several years, but his friends in the association would not permit it, because of attacks that had been made upon him. However, an assistant secretary had been provided for him, and at the Los Angeles meeting Dr. Simmons' resignation was accepted and the assistant secretary, Dr. Alexander R. Craig, of Pennsylvania, was promoted to the secretaryship. Dr. Craig is eminently qualified for the position and the association is fortunate to have the very important duties of secretary placed in his hands.

Dr. J. A. Witherspoon was re-elected as a member of the Council on Medical Education. Dr. Witherspoon did not attend the Los Angeles meeting because of an attack of appendicitis. The writer heard many expressions of regret at Dr. Witherspoon's absence because many thought it the time for him to be made president of the association. Dr. Witherspoon's ability, added to his oratorical powers and the good fellowship that is a part of his nature, have made him one of the most popular, as well as one of the most useful, members of the association; and his friends feel that whenever he will allow the use of his name for the presidency of the A. M. A., the distinction will surely be accorded him.

Dr. A. B. Cooke, of Nashville, was a member of the Judicial Council, and Dr. James Martin, of New Orleans, was appointed a member of the Committee on Uniform Membership.

In the next number of the Journal we hope to review some of the most important of the papers read before the various sections, as was done last year. Most of the above comments were written on the train en route to San Francisco, and since our trip will be extended to Alaska, our summer's vacation will not end until some time in August.

Hemoglobinuric Fever Report

Doctors Deeks and James, of Ancon Hospital, Canal Zone, have rendered a most important service to the medical profession in their exhaustive study of hemoglobinuric fever as it is seen on the Isthmus of Panama.

Physicians everywhere, but especially in the South, have long since learned to recognize this condition as one of the most formidable phenomena of malarial regions, yet their experience has led many of them to doubt whether the plasmodium malariae is the actual cause. The one fact that many of them whose experience is extensive believe that the most successful treatment excludes quinine from its therapeutics is ground for suspecting some other or additional etiological factor besides the malarial protozoon. Drs. Deeks and James undertook the investigation with minds free from bias and open to truth from any source.

Their observations comprised 250 cases of the disease, which occurred in Ancon Hospital. They analyzed only those cases which "manifested the characteristic blackwater fever due to hemoglobinuria, with the presence of granular detritus," etc. They believe that the data they have collected will throw

some light on the question as to whether or not there is a separate and distinct organism responsible for the hemoglobinuria which characterizes the disease.

The report is a pamphlet of 177 pages and is submitted by the investigators to Col. W. C. Gorgas, Medical Corps U. S. Army, Chief Sanitary Officer Isthmian Canal Commission, Ancon, C. Z.

The first statement of an unexpected nature is that *"a larger percentage of cases of hemoglobinuric fever than of malaria is sent to Ancon Hospital."* (See p. 13.)

The diagnosis of malaria is called "positive" when parasites are found, "clinical" when the symptoms warrant such a diagnosis though the parasites cannot be demonstrated.

The forms of parasites found are the tertian and the estivo-autumnal, quartans being so rare as to be negligible. Mixed infections constitute between 1 and 2 per cent of the "positive bloods." Patients are constantly seen whose blood contains parasites, but who show no fever. On the other hand, "often there is fever when no parasites can be found."

Another curious circumstance is indicated on page 19, namely, that the "increase and decrease of the prevalence of malaria cases corresponds almost exactly with the increase and decrease of rainfall."

Our authors do not ascribe this curious circumstance to the increase or decrease of infected mosquitoes, stating that "the increase in malaria of each year always antedates, by several weeks, any appreciable increase in the number of anopheles mosquitoes." They consider such cases as relapses from previous infections, which have enjoyed temporary immunity though infected. The most potent cause, at Ancon, for interrupting this immunity is syphilis. Such malarial attacks require anti-syphilitic treatment before the anti-malarial therapeutics are effectual. Influenza is also a cause of relapses in malarial infection. The estivo-autumnal type is most common. During such relapses the development of gametes is common (p. 21). Relapses are more numerous than original infections, climatological conditions greatly influencing their frequency.

Another important fact (p. 27) is that though "the percentage of positive bloods among the Europeans and negroes is about the same," owing to their relative immunity, the latter "suffer less from malaria than the former," though the negro is more exposed to infection.

Contrasting the periods of their prevalence, it is found that malaria is more prevalent in the early part of the wet season, hemoglobinuric fever in the latter part (p. 31), though malaria is also intense towards the close.

Hemoglobinuric fever prevails in proportion to the amount of previous malarial infection, and its seasonal occurrence follows that of malaria. Moreover, the amount of previous malaria, whether recent or remote, determines the prevalence of hemoglobinuria. (p. 44.)

The irresistible conclusion is that malaria is the predisposing cause of the disease. Also, it is the estivo-autumnal type that predisposes to hemoglobinuria, as it prevails only where that parasite is present (p. 49). A residence of two or three years in a malarial region predisposes more than a shorter period.

Hemoglobinuric fever is found in "case after case" in which the plasmodia cannot be found, though repeatedly sought. It occurs in patients who have been so saturated with quinine (p. 55) in 30 grain doses for from five to twenty days as to render it impossible for active parasites to live in the blood serum.

Our authors consider this conclusive evidence that the malarial parasite is not the actual immediate cause of hemoglobinuric fever.

Neither do they consider quinine the etiological cause, as no record can be found of the disease following the free and long continued use of that drug, unless the patients had a previous history of malaria. Nor do they believe there is any specific parasite

which causes it, as though it is an acute disease it is not at all infectious, and no imaginable host exists to harbor it during the long periods when no cases are seen. It appears only after malarial phenomena and never complicates any other disease save malaria.

Their conclusion is that just as bacteria secrete toxins, each according to its kind, so do the plasmodia malariae secrete a toxin specific to themselves, and this toxin is cytolitic, tending to dissolve and break down the red blood corpuscles.

When sufficiently concentrated to destroy, simultaneously, 25 per cent or more of those corpuscles, an attack of hemoglobinuric fever supervenes.

This theory does not necessarily antagonize the fact that sometimes quinine excites an attack. The drug is, itself, a protoplasmic poison, and the corpuscles only escape its destructive effect on account of their own inherent power of resistance. When that resistance is almost overwhelmed by a cytolitic toxin the added toxicity of the quinine affords the last necessary element for their destruction.

Thus also over exertion, overheating, alcoholic excess, syphilis, influenza and other depressing conditions aid in precipitating the explosion.

The necessary treatment varies with the conditions, but the malarial element must be eliminated when demonstrable, if quinine does not cause a blackwater paroxysm.

Quinine administered hypodermically is more effective than by mouth.

The neglect of malarial cases in a severely infected region seriously predisposes the patients to hemoglobinuric fever. When nonimmunes enter such a region they will escape blackwater fever if prompt prophylactic and therapeutic measures against malaria are instituted.

Their observations, charts and reasoning establish the foregoing statements apparently beyond controversy. Their case records are systematic, full and carefully kept. The general plan of treatment adopted by these investigators was as follows, varying, of course, with the conditions:

During the attack while "vomiting, epigastric distress, intolerable thirst and hiccough" are present these symptoms are "very often immediately relieved by the administration of normal saline solution per rectum or by hypodermoclysis." Eight to sixteen ounces are readily absorbed with astonishingly gratifying results.

Hot, moist applications over the stomach and loins are also grateful. The only medication given in the early stages is calomel, followed in a few hours by magnesium sulphate. If parasites are present quinine is given, preferably by hypodermic injection, 10 to 15 grains every four to six hours, and its effect carefully watched.

If quinine aggravates the hemoglobinuria it must be suspended for a few days.

If the attack is not so violent as to threaten immediate death the expectant treatment (i.e., no quinine) is best, giving only a milk diet. Bashams' mixture, which is both ferruginous and diuretic, is used.

"Later we give Fowler's solution."

"The great majority of our patients get no quinine until such time in the course of the disease as convalescence is established."

If a chill occurs, and parasites are found, quinine is given. If it produces or aggravates hemoglobinuria its administration "is postponed for a few days."

If syphilis is present it should receive appropriate treatment.

Altogether the report seems to the Journal to be a document of inestimable value. It should put an end to the existing uncertainty as to the proper prophylaxis and treatment of a much dreaded disease concerning whose therapeutics doctors disagree. Though the malaria on the Isthmus is generally supposed to be of a more malignant character than it is in more temperate zones, yet probably the only difference lies in the multitude of reinfections on the Isthmus.

The hemoglobinuric fever described tallies exactly with the cases seen in two epidemics witnessed by the editor, and in the second of those quinine was abandoned and a treatment much like the one recommended was adopted. The chief points of difference were that no salt was used in the enemas, its usefulness being then unrecognized; and when all else failed to relieve the distress morphine in small doses was administered hypodermically. The results, though not entirely satisfactory, were far more so than those of the previous plan of saturation with quinine.

The report is too large and too valuable to be scattered broadcast where it may not be appreciated, but if any reader of the Journal who desires a copy will send us a postal card so stating, we will take pleasure in trying to secure a copy for him.

Veto of the Optometry Bill

Governor O'Neal's veto of the bill to place the fitting of spectacles upon a professional basis should be remembered in his favor whenever a balance between his actions, wise and otherwise, is being struck.

It would have been much easier to bow to the popular idea which leads to the support of just such efforts whenever due solicitation is exerted.

Few people would hesitate to sign a petition in its favor if approached by a personal friend, and every signer would feel aggrieved if his signature was ignored. They would not remember, perhaps they would not know, that the derangement of vision which would cause one to visit the "optometrist" was often the danger sign which should send the patient to the oculist, whose diploma was won only because of a knowledge of the structure, action and diseases of the eye such as the "optometrist" lays no claim to. An error in treatment at the beginning may often lead to disaster afterwards.

The fitting of glasses, like that of other things, is a respectable and an honorable calling, but it is not a profession.

The A. M. A. Journal (May 6, 1911) says: "His veto message should be read by all interested in preventing the passing of these bills." This Journal endorses that opinion.

A Point of View

In "The Health Master," an illuminating story in the "Delineator" for July, the doctor asks his most critical client the following question: "Would you rather be bitten by a rattlesnake or a mosquito?" Of course, the answer is "by a mosquito." Then he proceeds to show that in every region where malaria exists the mosquito causes scores of deaths and constant illness, while the rattler does not find one victim among scores of thousands of the people who disturb his haunts with axe or plow. Yet the destruction of the malarial parasite is within the reach of possibility. Obligatory screening of houses, obligatory use of mosquito netting over all beds, and obligatory submission to periodical examination by physicians properly qualified and commissioned, with obligatory submission to treatment when found necessary, would, in twelve months, deprive the mosquitoes of the power to cause malaria by their bites. "How visionary!" exclaims the practical person. Yes, but the vision must always precede the accomplishment.

Zinc Phosphide for Herpes Zoster

Waugh, of Chicago, in Medical Record, May 27, advises zinc phosphide for herpes zoster. He says that though the text-books afford no explanation of its action in this disease, yet any one who will test it clinically will prove its control over the condition. He advises doses "not to exceed one centigram for an adult, and one hour before meals, so as to keep it away from the influence of the gastric juice." Its efficacy is, he says, certain and uniform. Such a valuable pointer should be kept in mind by every practitioner.

Why Cocane May Fail

In the Cincinnati Lancet-Clinic of June 17 is an article by Derrick T. Vail, M.D., read by him before the Academy of Medicine, of Cincinnati, April 3, 1911.

The subject is "Enucleation of the Eye Under Local Anaesthesia—Indications and Technique." The paper is a model of precise and concise expression, and portrays the operation so clearly that one familiar with ophthalmic surgery needs no illustration to understand its every step.

Dr. Vail describes the operation as safe, almost bloodless, and free from pain. Dr. J. S. Weyler, in the discussion, related his own experience, comprising only two cases. In both of these cocaine failed to afford anaesthesia. Dr. J. H. Williams and Dr. W. E. Schenck each had a similar experience with one case.

Dr. C. W. Tangeman had also failed, in one or two cases, to get anesthesia with the weak solution of cocaine.

The object of this note is to suggest a possible cause for these few failures, surrounded as they are by so many brilliant successes. Sometimes the solution of cocaine is inert, and utterly devoid of anesthetic properties. Whether the cause is excessive boiling during sterilization, or from some other condition, it is impossible to even surmise in many cases, but the fact is easily demonstrated when it occurs.

Some years ago, when we knew less about cocaine than now, the writer assisted one of the most learned ophthalmologists in the South in an operation on the eye.

To be sure of having a reliable solution of cocaine a small quantity, sterilized and ready for use, was ordered from Squibb, in New York. It failed to cause anesthesia. The patient could tolerate neither knife nor needle, and the case was about to be pronounced one of idiosyncracy, when a medical student present proposed that the surgeon try a cocaine tablet from his hypodermic case. It was done and relief was promptly given. The operation was then completed without pain.

Whenever a surgeon finds his cocaine solution failing to cause anesthesia he should make another. The tenth of a grain to ten drops of water, or six tablets of 1-10 (or 3 of 1-5 of a grain), dissolved in a teaspoonful of water makes approximately a one per cent solution. This can be sterilized sufficiently by holding the teaspoon over the flame of an ordinary match until the match stick is consumed. The writer has given hundreds of hypodermic injections of various drugs, always sterilized as above directed, and has never seen an infection from such a puncture. Before approaching an operation with cocaine the solution should first be tested by placing a drop on the tip of the tongue. It will demonstrate its power by causing a sensation of numbness easily recognized.

Be a Doctor

In the Therapeutic Gazette of June 15, 1911, Dr. H. A. Hare, leading editor, proclaims in courteous but emphatic terms his dissent from the authority of experimental pharmacology whenever its conclusions are opposed to those of clinical therapeutics. The position he so ably maintains is identical with that assumed by this Journal, namely: *Where the teachings of pharmacology, based upon experiment on animals, or on healthy people, are opposed to the conclusions reached by many doctors after many years of clinical observation and experience, the deductions of pharmacology must yield to the verdict of clinical therapeutics.*

He quotes conclusions of eminent pharmacologists showing how unreliable and useless their teachings are from the standpoint of practical therapeutics.

One such "in his classification of remedies places antitoxin and castor oil in the class of Ferments, Secretions and Toxalbumins." With such a conception of castor oil, how would the recent graduate know its uses?

He says: "Some of the pharmacologists, largely because of their lack of clinical experience, have actually had the temerity to adversely criticise measures which long years of experience have proved to be valuable."

Pharmacology is a useful study, but it should always be considered as secondary to clinical therapeutics. When he or his family are stricken with serious illness no one sends for the practical, dosing doctor, and swallows his medicines more religiously than the nihilistic pharmacologist. It is his influence in casting doubt over therapeutic usefulness, affecting the unformed minds of young practitioners, that is harmful. His constructive work, his addition to our positive knowledge without reasoning therefrom to conclusions only properly attainable by men of wide experience, is beneficent, and tends to lead medicine towards that pinnacle of exact science which is the goal sought by all investigators.

Pharmacology is good work, and while it goes on let us resolve:

To hold fast to that which our own experience, and that of the fathers, shows to be good, no matter how apparently absurd from the standpoint of pharmacology; to prove all things, trusting to clinical observations of ourselves and others for conclusions, rather than observations of test tubes or animals to classify our drugs, if we can, but never throw one over because we cannot understand how it acts, and therefore doubt its action. How does egg albumen cause furious urticaria in certain subjects with an idiosyncrasy; or the faintest dust of powdered ipecac in a room excite asthma, or even pulmonary edema? Better not listen to tales that calomel does not cause a flow of bile. Take a few grains yourself. Then you will know whether or not its action is like that of magnesia sulphate, or entirely different.

Stick to your pepsin and pancreatin. They may not work in a test tube, but your patients can give you more reliable data. Use alcoholic stimulants in cases wherein our predecessors prescribed them. Who cares whether they are stimulants or not? They do good and may save life. Give calcium sulphide, fresh and strong, for infections and suppurations. Try it on pellagra, with your old fashioned Tr. Ferri and Potass. Chloratis. Too many observant doctors who have tried it believe in it for a practical man to allow the sardonic grin of the pharmacologist to prevent him from seeing for himself what it will do.

Be as scientific and as watchful as any, but when you are called to see a sick man forget that you are an investigator. Exert all your faculties to find out what he needs, and give it. Be a doctor!

Salvarsan

Dr. S. Pollitzer, in a paper read before the Medical Society of the State of New York last April, expressed a more unequivocal approval of salvarsan in various venereal affections than is usually given utterance.

The following are some of the conditions in which he advises its use:

Patients with active, infective lesions of syphilis.

Patients with extensive gummatous or ulcerative lesions.

Patients with involvement of important structures like the eye or the throat.

Patients with syphilis complicating pulmonary tuberculosis.

Patients with early stages of tabes, with pains or sphincter symptoms.

Patients with positive Wassermann reaction, notwithstanding mercurial treatment, or even absence of visible lesions.

"Infants with hereditary syphilis should receive salvarsan in minute doses. In patients with painful lesions of the bones or throat and with syphilitic cachexia a gain of 12 to 15 pounds in body weight in two weeks has repeatedly resulted from treatment with salvarsan."

Dr. Howard Fox spoke less positively of the drug. He considered the effect upon the

Wassermann reaction "much less favorable than on the clinical manifestations of syphilis."

Dr. W. S. Gottheil said that "salvarsan does not cure any more than does mercury." Symptoms recur "more frequently after treatment with salvarsan than after treatment with mercury." It has been efficacious "in the early type of syphilis."

Dr. George Henry Fox spoke of the disappointment as "severe" to those "who imagined that syphilis was to be forever cured by one dose of salvarsan."

He still, however, considers it a remedy which, in certain cases, "will accomplish what no other remedy or method of treatment has done." The disappearance of symptoms does not prove a cure.

Dr. W. Litterer, of Nashville, speaking in the Tennessee State Medical Association, said: "Torrance and McAlester have given salvarsan intravenously in three cases of pellagra, with marvelous results." Dr. Litterer reported conclusions drawn from a series of 60 cases. He considers the intra-muscular injection safer than the intravenous. Hence it should be tried first. The W. reaction showed negative in 35 per cent of his cases after a single injection. Out of this number 15 per cent showed W. reaction after three months, and an additional 6 per cent after two months more.

The Bacillus of Typhus

Predjestchensky has isolated a bacillus from the blood of typhus patients which responds to the usual tests, including agglutination. It has long been thought that the body louse was the transferring agent of the disease, and the possibility of such a mode of infection is undeniable. But Predjestchensky cultivates this organism from the sputum also and "thinks that its presence here may be the chief factor in the spread of the disease." The two theories do not conflict.

BOOK REVIEWS.

DIAGNOSTIC METHODS.

Second Edition Revised. A Treatise on Diagnostic Methods of Examination. By Prof. Dr. Hermann Sahli, Director of the Medical Clinic, University of Berne. Edited, with additions, by Nathaniel Bowditch Potter, M.D., Asst. Professor of Clinical Medicine, College of Physicians and Surgeons, New York. Octavo of 1229 pages, containing 472 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $6.50 net; half morocco, $8.00 net.

This work is too renowned to need a very extensive review. Former editions, especially the authorized translation, are universally known, and this edition needs no introduction to the medical profession. This revised edition of the translation is destined to meet with greater success than the first.

Much of the subject matter represents the products of the author's experience and opinions, and his special method of examination hitherto unpublished. Such a masterful work as this is indispensable to the physician.

The suggestion and scheme for history taking, and the general routine of an objective examination are most important features of the first few chapters. Then there follows a consideration of physical diagnosis, the best text written on such a subject, in which the steps of examination of the heart, lungs, etc., are taken up in order, with a most elaborate detailed description of each. The chapters on the examination of the stomach, stomach contents, intestines, feces, urine, and sputum are complete in every respect. Then the author takes up the examination of blood, nervous system and various regions and organs. Such is in general the plan of the work.

Undoubtedly this vade mecum of methods is without a peer, and is strictly alive and up to date. The success of the young physician depends upon mastering such a text as this.

THE CARE AND TRAINING OF CHILDREN.

By Le Grand Kerr, M.D., Brooklyn, N. Y. Funk and Wagnalls Company, New York. 12mo., 233 pages, cloth, 75 cents net; by mail, 82 cents.

This valuable little work is the result of the author's observation and many years' experience as a physician, in which he presents, not a "system" of training, but rather helps and suggestions on the care of training children as gleaned from the school of experience. The author emphasizes the necessity of individual study and comparison with other children and an effort being made to recognize the underlying basis for any undesirable peculiarity or fault of the child, in order to correct it. A thor-

ough knowledge of the child's nature is necessary to wisely regulate its life. Every phase of the physical, mental and moral development is carefully discussed, and suggestions are offered which have hitherto in the author's experience given the best results.

It is indeed an excellent manual to place in the hands of those who have the responsibility of guiding the child to maturity.

DIAGNOSTIC AND THERAPEUTIC TECHNIC.

By Albert S. Morrow, M.D., Adjunct Professor of Surgery, New York Polyclinic. Octavo of 850 pages, with 815 original line drawings. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.00 net.

As the title indicates, this is a book of methods and procedures employed in diagnosis and treatment, and is by far the best and most complete work of its kind published. It embraces 850 octavo pages, with 815 original line drawings.

The plan of the book is logical, dealing with the description of certain general diagnostic and therapeutic methods, and second, with the description of those measures employed in the diagnosis and treatment of disease affecting special regions and organs of the body.

The articles on anaesthetics are very complete, dealing with the precautions, preparation for, and technique of administering general, local and special anaesthetics. Sphygmomanometry, transfusion, hypodermic medication, Bier's hyperemic methods, etc., are very clearly described. On account of the importance attached to the laboratory in diagnosis, the author has been very careful to give complete detailed descriptions of the methods of collecting and examining excretions, discharges, blood, bacteria, and the position and technique of exploratory punctures of the pleura, pericardium, periotoneum, and spinal column.

In the part devoted to special organs and regions of the body, the author presents the best of the old and the new methods of diagnosis and the special therapeutic measures peculiar to each part. These include the examination of the eye, ear, nose, respiratory, alimentary, genito-urinary tracts, and so forth. The employment of transillumination in examining viscera and sinuses should become valuable aids to the diagnostician. The work is very complete in every respect, and should be available to every physician and surgeon.

GOEPP'S STATE BOARD QUESTIONS AND ANSWERS.

Second Edition Revised. By R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic. Octavo volume of 715 pages. Cloth, $4.00 net; half morocco, $5.50 net. W. B. Saunders Company, Philadelphia and London.

The purpose of this work is primarily that of preparing students for the State Board examinations, and for such it is admirably suited. The answers to questions, which have been compiled from various State Board examinations, are very definite and comprehensive, and such information is indispensible to the student. A certain order has been adopted in the arrangement of the questions, making the volume an excellent compend on each branch. Every phase of medicine presented, represents the latest knowledge and advancement, and only the essentials are included.

In this second revised edition, the author has very wisely added interesting and valuable sections on such subjects as serum and vaccine therapy, and anaphylaxis, organotherapy, chemotherapy in general. Full and complete explanation and description of the serum diagnosis (Wasserman-Noguchi reaction) together with the treatment of syphilis, are very acceptable additions. Other noteworthy additions are articles on diseases due to intestinal parasites and other tropical diseases; new heart physiology and studies on the circulation phenomena.

Not only to the student, but likewise to the practitioner this work is a splendid quick reference book, and also a means of constantly reviewing the various branches and keeping abreast with the developments in medicine and surgery.

THE ESSENTIALS OF HISTOLOGY.

By E. A. Schafer, M.D., Sc.D., LL.D., F.R.S., Professor of Physiology, University of Edinburgh. Eighth Edition. Lea and Febiger, Philadelphia and New York.

A descriptive and very practical text for the use of students. The author has avoided the perplexing details, and has presented only the essentials of histology, making it a concise and practical text not only for the student, but also for the physician who wishes to review this subject.

The subject matter is divided into fifty chapters of such length that each chapter can be taken at a lesson. In this way the whole subject can be covered in a very short time. One feature of the work is the excellence of the cuts and illustrations, which are printed in colors, representing the exact appearance under the microscope of normal tissue when stained by the usual methods. The appendix contains the essentials of microscopy, giving all of the important methods of fixing, staining, cutting, and mounting tissue.

THERAPEUTICS

Certain essayists in medical journals have expressed an opinion that a doctor who would give a dose of a coal tar antipyretic to a patient with pneumonia or typhoid fever deserves to be prosecuted for malpractice. Others say that a few doses in the beginning of such cases are useful and do no harm. In actual practice many physicians all over the country follow the latter plan. A favorite prescription with such is as follows. It is supposed to be identical with a widely advertised drug "opposed to pain":

R. Acetanilid . . . . . grs. 70
Caffeine Cit. . . . . grs. 10
Sodium Bicarbonate . . . . . grs. 20
Mix, make capsules 20. One every hour to two hours.

These medicines are supposed to have exerted their complete effect in two hours after ingestion.

Acetphenetidin is almost identical in effects with acetanilid, but not quite so strong. It is frequently substituted for acetanilid in the foregoing prescription. Another formula sometimes used as an tntipyritic in cases of weak heart is as follows:

R. Acetphenetidin . . . . . grs. 40
Ammonii Carb. . . . . grs. 20
Camphor Pulv. . . . . grs. 12
Sodii Bicarb. . . . . grs. 10
M. Ft. Caps. No. 15. One every two hours.

This is more frequently used in cases of neuralgia than for the reduction of fevers. When patients with high temperature are very restless the following is useful, if the antipyretics are allowable:

R. Acetphenet . . . . . drachm 1
Sodii. Bicarb. . . . . grs. 20
Codeine Sul. . . . . grs. 3
M. Ft. Caps. No. 12. One every two hours until fever subsides.

Antipyrine has the advantage of being readily soluble in water, and when an antipyretic is desired in fluid form lends itself very readily to the purpose. The following is from Steven's Modern Materia Medica and Therapeutics:

R. Antipyrine . . . . . grs. 50
Sodii Bromidi . . . . . grs. 90
Glycerine . . . . . ounce ½
Aq. Menth. Pip. q. s. ad . . . ounces 3
Dose, a teaspoonful for a child 3 years old.

This prescription is especially recommended for the spasmodic stage of whooping cough.

By itself, as antipyretic, the dose of antipyrine is from 5 to 15 grains.

As is well known, salicylic acid has considerable antipyretic power. It is also one of the most reliable intestinal antiseptics.

Autointoxication from intestinal derangement being one of the causes of high temperature in many forms of fever, a combination of that drug with some antipyretic naturally seems desirable. Several combinations of this character have appeared and been found very useful, especially in cases with a rheumatic element. The chief example of this combination is salicylate of antipyrine, called salipyrene. It is not very soluble in cold water and is generally given in capsules, in doses of 5 to 8 grains. It should not be combined with anything containing an acid, an alkali, or tannin. Hence it should not be prescribed in a mixture containing citrated caffeine or bicarbonate of soda, as sometimes happens. It is very useful in moderately severe cases of rheumatism, and morphine or codeine may properly be prescribed in the same capsule. It has been found very useful in controlling the pains and fever of la grippe.

It is without doubt a valuable preparation.

ASPIRIN.

Contrary to a common impression aspirin is not a chemical compound of antipyrine, but is acetylsalicylic acid. It possesses all the antipyretic powers of salicylic acid with the antirheumatic and pain relieving properties also.

It is free from the disintegrating effects on the red blood corpuscles with which the three leading coal tar antipyretics are charged, and is largely superseding them in a wide range of therapeutic practices.

It is supposed to defy stomach digestion, and to reach the small intestines unchanged, there to be transformed into salicylic acid and acetic acid. Whatever may be the soundness of the theory, in practice it works well. Unless it is desired that the change just mentioned shall take place in the stomach, it should not be mixed with any alkali. Alkaloids are not incompatible.

PYRAMIDON.

This drug is a dimethyl-amido-antipyrine and appears as a yellowish crystaline powder.

Sollman says "this compound is three times as active as antipyrine, its effect lasts longer and it is no more dangerous." Doses from 2 to 4 grains, in capsules. Though antipyrine is often said to be more prone to cause unpleasant results than acetanilid or acetphenetidin, it is probably only because of the large doses at first recommended by the investigators who introduced it to the profession. The writer well remembers that introduction as it appeared in the American Journal of the Medical Sciences some forty years ago. He sent to New York for an ounce and took the dose recommended, 30 grains, to see how it worked. As no harm was done, he began to use it for fevers, and soon found that doses of 10 to 15 grains were less disturbing to the patients. It was a full year later before Dr. C. K. Caruthers, of Como, Miss., discovered its analgesic effect. He informed the writer, who told a friend from Memphis, and soon the medical journal published in that city announced the important truth. It may not have been the first published announcement, but it was one of the earliest, and the writer of that article, who had utilized his many opportunities to test the matter, certainly conferred a blessing upon many hundreds of doctors and thousands of patients who, but for his timely article, would have waited much longer for the valuable knowledge. Other medical journals had little to say on the subject until a certain German journal a month later announced, as a German discovery, the analgesic properties of antipyrene. Then they all made haste to join in the chorus. For excessive action of any of the drugs described the antidote is either a dose of whisky and sweetened water or a teaspoonful of paregoric, together with camphorated oil hypodermically, strychnine ditto, the recumbent position and external heat.

CHRONIC MALARIAL POISONING.

In every place where intermittent and remittent malarial fevers prevail at certain periods of the year, there will be found a number of persons whose health is poor, but whose symptoms are so obscure that a positive diagnosis is not easily made.

They are languid, weak and not disposed to exertion of any kind. Sometimes their temperature may vary from a half to a whole degree at irregular intervals, while at other times it remains at or slightly above the normal. The complexion has a more or less "muddy" tint, and the sclerotic coat of the eyes loses its pearly hue and has a dingy appearance. The tongue is slightly coated in the center and towards the rear. The appetite is fitful and the bowels sluggish. Their blood is very deficient in hemoglobin and red blood corpuscles. These patients are not compelled to cease their ordinary avocations, put pursue them with an effort. Their elderly female relations are apt to pronounce them "bilious," and to prescribe a dose of calomel. This makes them feel better for a day or two only.

These cases are generally "gamete carriers." Their blood is poisoned with gametes, a stage of existence of the malarial parasite which Dr. C. C. Bass, of New Orleans, says cannot be destroyed by quinine.

They may be present in large numbers without causing any symptoms at all.

Darling, however, has apparently demonstrated at Panama that the gametes can easily

and quickly be destroyed by proper quininization.

These gametes supply the element for multiplication of the malarial parasite in the body of the mosquito, so that these unconscious gamete carriers are a cause of perpetuating the disease. They are also the cause of malarial attacks months after all mosquitos are gone. The cases that show the train of symptoms first described suffer from a union of sexes of the parasites within the blood corpuscle, not the usual manner of propagation. The union is, according to Henson, marked by the appearance of a great number of pigment particles which soon are distributed through the blood stream, causing the muddy complexion and conjunctiva.

There is a plan of treatment for these cases which is generally so efficient as to be very gratifying. First, the intestinal tract is cleared and disinfected by a quarter of a grain of calomel every hour until effectual. Then, if the patient is an adult, ten grains of Euquinine are given at 10 o'clock every morning (divided into two five-grain doses to be given an hour apart) for three successive days.

Then the following prescription is regularly administered:

R.	Euquinine	drams I
	Ferri Pulv.	drams ss

Mix well, make sixty powders. Direct. Take six powders two hours apart, beginning at 8 a. m. Repeat daily until all are taken.

In fourteen days from the last dose renew the prescription and take as before. Continue the plan until three courses have been taken. The bowels should be kept regularly active, and the usual rules of proper living, avoidance of fatigue, exposure, excess, etc., observed.

The result of this treatment will be so evident by the time the first course is taken that no urging will be necessary to insure its continuance. For delicate or very young people half a drachm of Euquinine will be enough in the sixty powders. Since the preceding was written a very valuable article has been assigned to this Journal, discussing the subject from a parallel standpoint.

It is by Charles F. Craig, M.D., of the P. H. & M. H. service, Washington. It treats of the prophylaxis of malaria, and will amply repay careful reading. (See page 469, July, 1911.)

Treatment of Scarlet Fever and Measles in a Children's Home, Without Isolation.*

"But to return to measles. There are not a few who desire that compulsory notification be adopted But such a. course is strongly opposed by others as quite useless." Among these is Dr. Robert Milne, who read a paper on the subject in the section for children's diseases on March 28 and who has had extensive experience as the medical officer of Dr. Bernardo's Homes, where 1,300 children are generally in residence. He has written several articles on scarlet fever and a small book, in which he has maintained that there is no need for either notification or isolation in this disease, because in his experience of over thirty years he has always found it amenable to treatment which not only cures the patients, but prevents the spread of the infection. Over 12,000 children have passed through the Bernardo homes during this period with altogether only 245 cases of scarlet fever. In these institutions when a child is admitted it is watched and if any infection is developed it is at once placed under treatment, but is not isolated. (The doctor has no fear, however; many children are in the ward, where the new patient mixes freely with all, uses the same toys, etc.) As one example of others: On March 8 he found a delicate boy in a dormitory where twenty-three others slept. Coryza and Koplik spots, etc., well marked; twenty-four hours later the rash

came out and he had a severe attack. He was treated there and joined by two fresh arrivals and later by two others. All remained in the dormitory and the whole number joined in play and meals with his usual good results.

The routine treatment is at the earliest moment to rub pure eucalyptus oil all over the child, repeat this inunction night and morning for four days, afterward once a day until the tenth day of the disease. In addition the tonsils and pharynx are carefully swabbed with 1 in 10 carbolic oil every two hours for twenty-four hours—seldom longer. He takes a swab of cotton wool the size of the last joint of the patient's thumb in a pair of forceps or tied on a pencil and soaking it in the carbolic oil gently but as completely as possible swabs tonsils and pharynx. This treatment of scarlet fever Dr. Milne now extends to measles and if at present he has not so many facts to report he has abundance to justify him in urging his brethren to give his method an extensive trial. When he first adopted it he used carbolic oil for inunction, but for twenty-seven years he has employed the pure eucalyptus oil. He avers that with it secondary infections and so complications are unknown. Properly carried out he declares children may sleep in the same room and even the same bed without fear; the mother can attend to them at home, the father may go on with his work, and after-disinfection is needless, the infection having been destroyed by the treatment. Thus all the trouble and anxiety of isolation may be avoided and of course notification is unnecessary.

The importance of the conditions announced in the foregoing abstract is very great. Dr. Milne is an authority whose views command respect.—*From Medical Record, London Letter, May* 20, 1911.

What Is Rheumatism?

Herbert C. De V. Cornwell, New York, states that articular involvement is only one symptom of rheumatism and not the whole disease. This he believes to be an infection or general intoxication affecting tonsils, heart, joints, muscles, etc. The *Diplococcus rheumaticus* has been isolated from practically all tissues that are subject to rheumatic manifestations. In rabbits it causes rheumatism. The tonsils may, in most cases, be the portal of entry for this micro-organism. Individuals who suffer from repeated attacks of rheumatism are often free after removal of the tonsils. The disease finds its favorite points of attack in serous membranes and in the lymphatics of the muscles. Children suffer most from throat, heart and constitutional symptoms and less from joint affections than adults. The author believes that chorea minor and rheumatism come from the same cause. One cannot ignore the relation of nutritional troubles to rheumatism.—*Medical Record,* April 1, 1911.

The date of the foregoing is a little suspicious. It is well, however, to be careful about accepting newly described bacilli as genuine etiological factors in diseases hitherto unaccounted for, regardless of dates. Edgar says: "The rheumatism virus is unknown." Many investigators have found bacteria in the joints and blood, but the organisms are neither constant nor uniform.—(Eds. S.M.J.)

Micro-Organism Found in the Blood of Acute Cases of Poliomyelitis, No. 2.—"In examining the blood from acute cases of poliomyelitis in the human beings and also in monkeys in which the disease was produced experimentally, an organism was found different in morphologic characteristics from any heretofore described which may or may not, on further examination, prove to be the etiological factor in the causation of the disease. Blood smears being fixed in methyl alcohol for one minute and stained with carbol-thionin, the organism appears as a faintly stained blue rod with regular cell wall about 10 microns long and about .8 microns in width, curved at an angle of 50 to 75 degrees at

one end, occasionally at both ends. At times the curved end is bulbous. Some of the organisms appear to have a very finely granular protoplasm when the highest amplification is employed. They may be discerned by means of a 4 m.m. dry objective, but their characteristics are much more satisfactorily delineated under the 1-12 oil immersion lens. They are found free in the serum as well as within the body of the red blood cell.

"The organisms do not retain the violet color when stained by the methods of Gram, but assume the color of the counter stain which, as generally used in this laboratory, is a very dilute solution of carbol fuchsin."

The foregoing is an abstract from a "Report to the Department of Health of the Commonwealth of Pennslvania."

The remainder of the report deals with the different experiments with infected blood, some from ten human beings and some from thirteen monkeys, giving technique and result in detail. Other bloods were also used in the investigations. The points of principal importance, however, are given in the above quotation. The report is signed by Samuel G. Dixon, M.D., Herbert Fox, M.D., and James B. Rucker, M.D.

SOIL POLLUTION BY HOOKWORM.

Stiles and Gardner (Bulletin U. S. P. H. and M. H. Service) have conducted experiments for the purpose of determining the length of time hookworm eggs may retain their vitality in the soil and under various conditions of drying and temperature. The soil under and around the privy is not entirely free from infection with hookworm even five months after the privy was last used, although the infection is considerably reduced at the end of four months. When the fecal material has undergone decomposition under water most of the hookworm eggs are dead in about ten weeks, though some still survive, but they would probably all be dead in three months. It would not be safe to use such material as a fertilizer in less than three months. It has been shown that chloride of lime fails to kill hookworm eggs in twenty-two to forty hours. The eggs of the typhoid fly and other species of fly are still capable of development after that length of time, and the flies are capable of reaching the open air even when material in which they breed has been buried under from 17 to 72 inches of sand.—*Journal A. M. A., March* 18, 1911.

THE BEST RESTORATIVES IN ANAESTHESIA COLLAPSE.

In the December number of the Texas State Journal of Medicine Dr. O. H. Plant, of Galveston, highly praises a mixture of cocaine and strychnine in solution, intravenously injected as a restorative in accidents during ether narcosis. They act powerfully to stimulate the centers of respiration, that being the function that fails under ether narcosis. Therefore artificial respiration, supplemented by the intravenous injection of cocaine and strychnine, is the logical treatment, and his pharmacological experiments sustain the theory. On the other hand in excessive chloroform narcosis it is the heart that fails and the blood pressure that fails, hence not only artificial respiration is needed, but also intravenous injections of an adrenal preparation and atropin, drugs which would be useless in ether narcosis. In chloroform collapse Plant considers camphor and digitalis too slow in their effect to save the patient, though their action is in the right direction.

Dr. Plant's article is thoughtful, rational and of great practical value.

RAW MEAT.—Hericourt, in the London Lancet, recently praised the usefulness of a raw meat diet in pulmonary tuberculosis, and believes it far superior, in such cases, to any other known form of nutrition. But every physician in this immediate part of the world who has ever tried to feed patients upon reasonable rations of raw meat, knows how difficult is the undertaking. By the time the first sensations of disgust is overcome, and

the patient becomes reconciled to nice sandwiches of bread and butter with finely minced raw beef between the slices, and seasoned "justright," along comes some wiseacre with a lecture on the natural history of tapeworm or the horrors of trichinosis, and after that, "broiled rare" is the best that can be done. Soon the same old rations boiled in grease to an indigestible crispness come to represent the beefsteak, and the doctor retreats to milk, eggs and boiled mutton, for mutton cannot be boiled too long.

PROPHYLAXIS AGAINST HOOKWORM DISEASE BY MEANS OF EFFICIENT SHOES.

W. F. Arnold, Philadelphia, Pa., calls attention to the poor quality of shoes furnished in America with reference to the penetration of water, by means of which hookworm infection enters. He advocates the use of the shoe seen in Europe, with wooden sole, which is impervious to water, as a preventive of the disease. Sterilization of the soil is not practicable, even if the use of proper toilet facilities were possible throughout the southern part of this country.—*Medical Record,* March 18, 1911.

BUREAU OF PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE.

WASHINGTON, D. C., April 5, 1911.

A board of commissioned medical officers will be convened to meet at the Bureau of Public Health and Marine-Hospital Service, 3 B Street S E, Washington, D. C., Monday, May 22, 1911, at 10 o'clock a.m., for the purpose of examining candidates for admission to the grade of assistant surgeon in the Public Health and Marine-Hospital Service.

Candidates must be between 22 and 30 years of age, graduates of a reputable medical college, and must furnish testimonials from responsible persons as to their professional and moral character.

The following is the usual order of the examinations: 1, physical; 2, oral; 3, written; 4, clinical.

In addition to the physical examination, candidates are required to certify that they believe themselves free from any ailment which would disqualify them for service in any climate.

The examinations are chiefly in writing, and begin with a short autobiography of the candidate. The remainder of the written exercise consists in examination in the various branches of medicine, surgery, and hygiene.

The oral examination includes subjects of preliminary education, history, literature, and natural sciences.

The clinical examination is conducted at a hospital, and when practicable, candidates are required to perform surgical operations on a cadaver.

Successful candidates will be numbered according to their attainments on examination, and will be commissioned in the same order as vacancies occur.

Upon appointment the young officers are, as a rule, first assigned to duty at one of the large hospitals, as at Boston, New York, New Orleans, Chicago, or San Francisco.

After four years' service, assistant surgeons are entitled to examination for promotion to the grade of passed assistant surgeon.

Promotion to the grade of surgeon is made according to seniority and after due examination as vacancies occur in that grade.

Assistant surgeons receive $1,600, passed assistant surgeons, $2,000, and surgeons, $2,500 a year. Officers are entitled to furnished quarters for themselves and their families, or, at stations where quarters cannot be provided, they receive commutation at the rate of thirty, forty, and fifty dollars a month, according to grade.

All grades above that of assistant surgeon receive longevity pay, 10 per cent in addition to the regular salary for every five years' service up to 40 per cent after twenty years' service.

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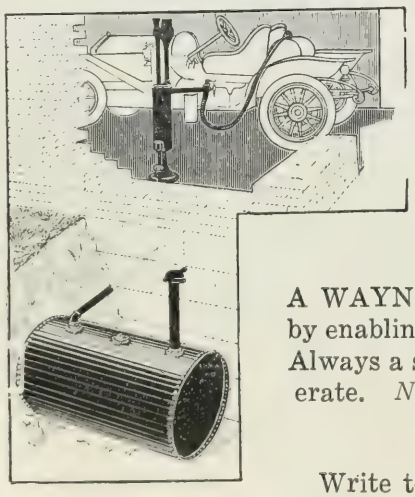

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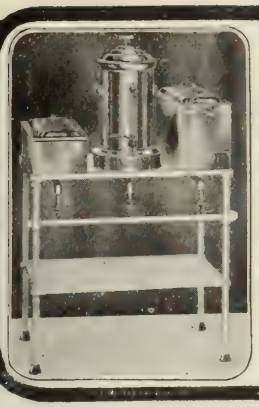

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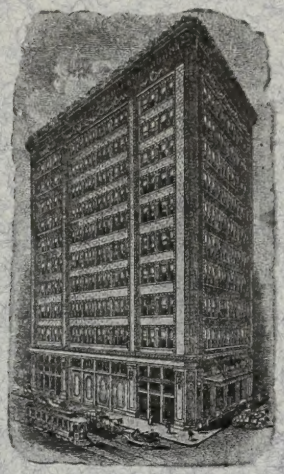

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